PERSONALITY AND THE COACH-ATHLETE RELATIONSHIP

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ABSTRACT

The coach-athlete relationship is a pivotal component in performance improvements (Phillips et al., 2023) and positive coach-athlete relationships can also enhance overall wellbeing (Davis et al, 2018). Personality traits have been identified as a key antecedent variable which affects the quality of the coach-athlete relationship and interpersonal outcomes (Jowett & Poczwardowski 2007). However, there is still limited empirical evidence on how personality traits, particularly those that might be more relevant to the sports environment, influence the quality of the coach-athlete relationship. This thesis aims to deepen our understanding of how personality influences the quality of the coach-athlete relationship, with an overall goal of supporting athletes and coaches to develop positive relationships within their working environments. This is addressed through four specific aims: 1) To explore the effects of narcissism, psychopathy, and Machiavellianism in the coach-athlete relationship; 2) To examine how coaches and athletes understand each other's personality traits and how this impacts coach-athlete relationships; 3) To expand current approaches to personality and coach-athlete literature by utilising a mixture of methodological approaches; 4) To provide recommendations and guidance for coaches, athletes, and governing bodies on how to support an effective coach-athlete relationship. To address these aims, this thesis is divided into five chapters.

Chapter 1 provides an overview of the current coach-athlete relationship and personality research and its limitations via a review of the literature.

Chapter 2 presents the first empirical study investigating how the Dark Triad (narcissism, psychopathy & Machiavellianism) and (dis)similarity in these traits are associated with the relationship quality of 316 coach-athlete dyads. Greater dissimilarity in narcissism resulted in higher relationship quality for both dyadic members. Actor effects indicated that higher levels of narcissism, psychopathy, and Machiavellianism were related to a reduction in coaches' own perceptions of relationship quality, whilst only higher levels of Machiavellianism were associated with a reduction in athletes' own perceived levels of relationship quality. Partner effects showed higher levels of athlete Machiavellianism reduced the relationship quality of coaches.

Chapter 3 presents the second empirical study which sought to explore how (dis)similarity in narcissism affects a coach's perception of their relationship quality. Using a critical realism paradigm, 30 coaches were purposefully sampled based on their responses to Coach-Athlete Relationship Questionnaire (Jowett & Ntoumanis, 2004) and Dark Triad Dirty Dozen (Jonason & Webster, 2010) narcissism scores in relation to four distinct groups: similar in trait narcissism/higher relationship quality; similar in trait narcissism/lower relationship quality; dissimilar in trait narcissism/higher relationship quality; and dissimilar in trait narcissism/lower relationship quality. The coaches participated in semi-structured interviews to examine their own experiences of similarity in narcissism and the subsequent influence on the quality of their coach-athlete relationship. Using Wiltshire & Ronkainen's (2021) three level framework of analysis, seventy experiential, eighteen inferential, and five dispositional themes were generated. The dispositional themes were perceived relationship perfection, high (perceived) self-awareness, breeding behaviors, relationship power and relationship elasticity. This study offers an insight into the experiences of (dis)similarity in narcissism for coaches. These experiences influenced the coach's behaviors within their relationship and contributed to their relationship quality.

Chapter 4 presents the final empirical study which was an eight-month longitudinal investigation into how high-performance coaches and athletes' individual personalities, and their perceptions of their partner's personality influence their relationship. In addition, an intervention element took place with each member of the dyad examining the impact of intra, interpersonal and situational effects of their personalities on their coach-athlete relationship quality. By combining personality and relationship assessments with semi-structured individual and dyadic interviews, as well as daily observations in both training and competition settings, five key themes emerged: A Personality to Believe In; Exposed Behind Closed Doors; In Power, No Power, or a Fight for Power; Close or Too Close? and Work With Me. The findings suggest that personality and relationship assessments can be a valuable tool for improving the alignment between coaches and athletes, ultimately enhancing their coach-athlete relationship.

Chapter 5, summarises and discusses the thesis' conclusion and provides guidance for coaches, athletes, and governing bodies to support an effective coach-athlete relationship. Overall, the work presented in this thesis provides an in-depth understanding of the role of personality

within the coach-athlete relationship. By exploring the effects of these traits on the quality of the coach-athlete relationship through alternative methodological approaches as well as working within an elite coach and athlete environment, a strong conceptual foundation of how coaches and athletes can build an effective working partnership has been demonstrated and provides recommendations to stakeholders within sport.

NOTE TO SELF

When you are not sure what to do, just keep going. If you stop that will be the end; if you keep

going, who knows what you will become.

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PREFACE

Research undertaken towards this thesis has contributed to the peer-reviewed publications and conference presentations, of which are listed below:

Peer-Reviewed Publications

Stanford, J. R., Roberts, R., Johnston, J. P., Sarkar, M., & Healy, L. C. (2024). "There's only room for one of us in this relationship": Examining the role of the dark triad in high-performance dyads. *Personality and Individual Differences*, *226*, 112688. https://doi.org/10.1016/j.paid.2024.112688

Stanford, J. R., Roberts, R., Johnston, J. P., Sarkar, M., Holmes, P., & Healy, L. C. (2025). You're just like me, so we must be great together: How similarity in narcissism impacts the quality of the coach-athlete relationship. *Sport, Exercise and Performance Psychology (In Press)*

Peer Reviewed Publications Related to Additional Research Projects

Stanford, J. R., Healy, L. C., Sarkar, M., & Johnston, J. P. (2022). Interpersonal perceptions of personality traits in elite coach-athlete dyads. *Psychology of Sport and Exercise*, 60, 102154. ttps://doi.org/10.1016/j.psychsport.2022.102154

Olsson, L. F., Glandorf, H. L., Black, J. F., Jeggo, R. E., **Stanford, J. R.,** Drew, K. L., & Madigan, D. J. (2024). A Multi-Sample Examination of the Relationship Between Athlete Burnout and Sport Performance. *Psychology of Sport and Exercise*, 102747. https://doi.org/10.1016/j.psychsport.2024.102747

Thesis Related Conference Presentations

Stanford, J. R. (2020, January). The role of personality in the coach-athlete relationship [Oral presentation]. Applied UK Coaching Research Conference. Derbyshire, United Kingdom.

Stanford, J. R. (2022, October). 'Knowing me, knowing you': the importance of athlete-coach relationships in achieving success. [Oral presentation] Flemish Federation Coaching Platform. Brussels, Belgium.

Stanford, J. R. (2022, July). "There's only room for one of us in this relationship": Examining the role of the dark triad in high-performance settings. [Oral presentation]. 16th European Congress of Sport and Exercise Psychology (FEPSAC). Padua, Italy.

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Thesis Related Awards

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NTU STAR Annual Conference, Nottingham, United Kingdom.

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LIST OF ABBREVIATIONS

APIM	Actor-Partner Interdependence Model
β	Beta
CART-Q	Coach-Athlete Relationship Questionnaire
CFI	Comparative Fit Index
df	Degrees of freedom
Dis-Higher	Dissimilar in Trait Narcissism/Higher Relationship Quality
Dis-Lower	Dissimilar in Trait Narcissism/Lower Relationship Quality
DT	The Dark Triad
DTDD	The Dard Triad Dirty Dozen
HSNS	Hypersensitive Narcissism Scale
E.G.,	For example,
I.E.,	That is
JARS-Q	Journal Article Reporting Standards for Qualitative Research
M	Mean
N	Total sample
n	Sub-sample
NPI	Narcissistic Personality Inventory
NARQ	Narcissistic Admiration and Rivalry Questionnaire
p	Significance
RMSEA	Root Mean Square Error of Approximation
SD	Standard Deviation

Sim-Higher	Similar in Trait Narcissism/Higher Relationship Quality
Sim-Lower	Similar in Trait Narcissism/Lower Relationship Quality
SRMR	Standardized Root-Mean-Square Residual
TIPI	Ten Item Personality Inventory
3 + 1Cs	Closeness, Commitment, Complementary, and Co-orientation
χ^2	Chi-Squared

CHAPTER 1: INTRODUCTION

1.1 Literature Review

1.1.1 The Importance of Studying the Coach-Athlete Relationship

The English term "coach" is originally derived from a medium of transport that traces its origins to the Hungarian word *kocsi* meaning "carriage" named after the village where it was first made (Stern, 2004). The term "coaching" as an instructor or trainer arose as a slang word in the 19th century at Oxford University, where it referred to a tutor who "carries" a student through their exams. Over time, coaching has been used in language to describe the process used to transport people from where they are to where they want to be. Today, "coaching" in sporting contexts is seen as a social process involving continuous interactions between a coach, an athlete, and the environment in which they are operating (Cushion, 2010). Lyle (1999) claimed that the relationship which is developed between the coach and the athlete is paramount for success. Unlike other types of relationships (i.e., romantic, sibling, friendships, etc.) the coach-athlete relationship is centred on achieving a collective goal while simultaneously fostering opportunities for personal growth and self-glory (Cook et al., 2021). Therefore, this relationship is often considered the most valuable in sport due to its unique ability to unlock an athlete's full potential. Thus, coaching goes beyond teaching sport-specific skills; it involves the ability to cultivate and sustain a strong, effective coach-athlete relationship (Jowett, 2017). Ultimately, to understand how to help people perform better together, we must first understand the dynamics of the coach-athlete relationship.

Early perspectives on the coach-athlete relationship emphasised a coach-centred approach (Kidman & Davis, 2006), primarily focusing on the coach's contributions. Over time, this focus shifted towards an athlete-centred approach (Cassidy & Kidman, 2010). However, both approaches overlook the mutual interdependence between the coach and the athlete. For example, a coach observes their athletes in a way the athletes cannot observe themselves, while athletes experience sport in a way the coach can never fully experience. Today, it is recognised that success in the coach-athlete relationship requires joint contributions, leading to what is known as the coach-athlete centred approach (Jowett & Slade, 2021). This perspective highlights the uniqueness of the coach-athlete relationship. Neither the coach nor the athlete can "do it alone": they both need one another to reach their combined desired goals (Jowett & Shanmugam, 2016). Therefore, given that this relationship not only enhances performance (Phillips et al., 2023) but also contributes to

overall well-being (Davis et al., 2018), it is crucial for future research to continue emphasising the genuine positive intent of the coach-athlete relationship, particularly from this new dyadic perspective.

1.1.2 Early Conceptualizations and Theoretical Foundations of the Coach–Athlete Relationship

The coach–athlete relationship is widely regarded as a central component of effective coaching and athletic performance. It is conceptualized as a dynamic interpersonal process shaped by the reciprocal interactions between coach and athlete, specifically their thoughts, feelings, and behaviours (Jowett, 2007). A prominent and widely accepted model for understanding this relationship is the 3 + 1Cs model, developed by Jowett (2007). This framework provides a structured lens through which the quality and functioning of the coach–athlete relationship can be examined. The model identifies four key components. Closeness, which refers to the emotional dimension of the relationship, encompasses feelings of mutual trust, respect, appreciation, and affection. This affective bond plays a critical role in fostering a sense of connection between coaches and athletes. Commitment captures the cognitive dimension of the relationship. It reflects the intention and desire of both individuals to maintain their relationship over time, particularly through the inherent challenges and fluctuations experienced in sport. Complementarity pertains to the behavioural aspect of the relationship, specifically the degree to which coach and athlete interact in a cooperative and reciprocal manner. This includes how effectively their roles align and how well they support one another through leadership and responsiveness. Co-orientation represents the perceptual alignment between coach and athlete regarding their understanding of the relationship itself. It refers to the extent to which both parties share similar views about the quality, nature, and direction of their relationship.

Seminal work focused on understanding how the coach-athlete relationship operated in the elite sport domain. Jowett and Cockerill (2003) investigated how 12 Olympic medallists perceived that their coach-athlete relationship had contributed to their success. Their findings demonstrated the prevalence of the positive relational aspects (i.e., feelings of closeness, such as trust and respect, thoughts of co-orientation, such as common goals, as well as complementary roles and tasks) as well as negative relational aspects, such as lack of emotional closeness and

complementary resources. For example, athletes' frustrations arose from feeling misunderstood by their coach and not receiving the type of training they wanted. As a result, they felt the training sessions delivered by the coach to be ineffective, believing any success achieved was solely due to their own hard work and persistence, rather than the coach's guidance. In addition, Philippe and Seiler (2006) utilised the three interpersonal constructs of closeness, co-orientation, and complementarity from Jowett (2003) within five elite swimming coach-athlete dyads from Switzerland. Participants were individually interviewed in either French or German, the choice of language depending on the participant's preference. The interview guide was a modified version from Jowett and Meek's (2000) study. The modified guide consisted of 57 open ended questions. The results demonstrated the importance of the coach–athlete relationship for the swimmers investigated. The relationship comprised five essential coach–athlete requirements (i.e., respect, esteem, admiration, appreciation and professionalism) and social relationship (closeness), communication and setting of objectives/goals (co-orientation), as well as acceptance and respect of roles (complementarity). It was revealed that swimmers placed great importance on maintaining good relations with their coach. All research to this point used qualitative research methods when exploring the coach-athlete relationship, which presented difficulties when trying to ascertain to what degree the 3 + 1Cs were present within different types of coach-athlete relationships or when trying to make comparisons between the quality of the coach-athlete relationship across different sports and contexts. Therefore, it was important to develop a measure to assess coaches and athletes' emotions, cognitions, and behaviours within coach-athlete dyads which allowed for quantitated investigations into the dynamics involved between the coach and the athlete from a relationship perspective.

With this in mind, Jowett and Ntoumanis (2004) used the previous qualitative work to develop and validate a self-reported instrument to assess the coach-athlete relationship, named the Coach-Athlete Relationships Questionnaire (CART-Q). They initially generated items that were relevant to both coaches and athletes in the broadest context of the coach–athlete relationship (e.g., club versus international relationship or family versus marital coach–athlete relationship), were applicable to the majority of coaches, and reflected the positive aspects of coaches and athletes' emotions (closeness), cognitions (commitment) understanding (co-orientation), and behaviours

(complementarity). This resulted in an initial pool of 39 items with 13 items representing each construct. After an evaluation of the items, two equivalent versions were produced, one for the coach and another for the athlete: both versions contained 23 items. The measure was then employed with a sample of 120 British participants, of which 50% were athletes and 50% were coaches, to assess the reliability and construct validity of the initial 23-item CART-Q, and the correlation with relationship satisfaction across the derived constructs. Additionally, Confirmatory Factor Analysis (CFA) was used in order to examine the component structure. This process resulted in a refined 11 items, whereby three items measured the construct of commitment, four items measured the construct of closeness, and four items measured the construct of complementarity. The 11 items were all formulated as statements (e.g., ''I trust my coach''). During the development of the CART-Q, one item "Do you strive to achieve similar goals with your athlete?" was considered to represent co-orientation. However, it was determined that this item did not adequately capture the level of interdependence and mutual understanding between the coach and athlete. In addition, eight other items that were initially hypothesised to reflect co-orientation were also eliminated, suggesting that it may not be a viable construct within the CART-Q. This outcome was believed to stem from the original operational definition, which drew on Duck's (1994) proposition: communication serves as the foundation for developing co-orientation. However, Newcomb's (1953) original definition of co-orientation focused on the perceptual consensus between relationship members, which differs from the communication-based approach used in the CART-Q. Consequently, the measure developed by Jowett and Ntoumanis (2004) does not include items that specifically capture co-orientation, unlike the constructs of closeness, commitment, and complementarity, which are explicitly addressed in the model.

To address this gap and gain a deeper understanding of co-orientation within the coach–athlete relationship, researchers commonly examine both self-perceptions and meta-perceptions of coaches and athletes. This approach allows for the exploration of how each individual views the relationship and how they believe the other person perceives it, thereby offering a valuable lens through which to assess alignment and misalignment in interpersonal perceptions. This dual-perspective approach enables the assessment of three key dimensions within dyadic relationships: actual similarity, assumed similarity, and empathic accuracy. These constructs help to highlight

how individuals understand both themselves and their partner within their relationships. Specifically, assumed similarity refers to the tendency of a coach or athlete to project their own internal experiences onto the other person; actual similarity denotes the extent to which both genuinely share similar interpersonal thoughts, emotions, and behaviours; and empathic accuracy reflects the ability to accurately infer another's moment-to-moment psychological state, including feelings, motivations, and reasoning (Ickes et al., 1990).

These dimensions are integral to understanding co-orientation, as they reflect the alignment, how coaches and athletes see themselves, each other, and their relationship. In a study by Jowett and Clark-Carter (2006), 121 coaches and athletes reported on their direct perceptions and meta-perceptions of the coach–athlete relationship (Jowett & Cockerill, 2002), alongside satisfaction with instruction and performance levels. The findings highlighted the practical significance of the three dimensions: for instance, athletes demonstrated higher empathic accuracy in recognising the emotional tone of their coach's perceptions of closeness, especially in early-stage relationships where attentiveness and sensitivity are heightened. Additionally, assumed similarity was found to be more prevalent among female athletes, suggesting a greater tendency to project their own feelings onto their coaches, an effect that, over time, may enhance mutual understanding and thereby improve actual similarity. Furthermore, coaches in individual sports demonstrated higher levels of empathic accuracy than their counterparts in team sports, likely due to more frequent and intensive one-on-one interactions (Lorimer & Jowett, 2009). For athletes, particularly females with male coaches, greater empathic accuracy was linked to higher satisfaction during training, as it enabled clearer interpretation of coaching intentions (Lorimer & Jowett, 2010). While co-orientation is not directly measured by tools such as the CART-Q, it remains fundamental to comprehending the coach–athlete relationship. Co-orientation captures what each party believes about how their partner views their shared relationship, often accessed through a meta-perspective (Laing et al., 1966). For example, an athlete's direct perspective might reflect their own view of closeness or trust with a coach (e.g., "I trust my coach"), whereas their meta-perspective reveals how they think the coach sees them (e.g., "My coach trusts me"). This dual-lens perspective reflects and interacts with the constructs of assumed similarity, actual similarity, and empathic accuracy.

Rhind et al. (2012) used this framework to explore differences in co-orientation across team and individual sports by analysing both direct and meta-perspectives using the CART-Q. Athletes in individual sports reported greater closeness and commitment, while those in team sports showed less alignment in perceived coach regard, highlighting lower actual similarity and perhaps reduced empathic accuracy in more complex team environments. These insights underscore the value of co-orientation as a lens to identify how relationship dynamics differ by sport context and how the three psychological dimensions manifest in those contexts. As such, future research is encouraged to focus on single-sport settings (Bachetti et al., 2013; Hodgson et al., 2017), where more controlled analysis of co-orientation and the associated psychological dimensions can be conducted. Using the CART-Q alongside meta-perspective assessments can yield rich, context-specific insights into how coaches and athletes can align perceptions and develop stronger, more effective working relationships built on mutual understanding.

However, to fully appreciate the complexity of the coach–athlete relationship, it is essential to situate it within a broader psychosocial context. The coach-athlete relationship does not exist in isolation; rather, it is embedded in wider social phenomena and influenced by multiple interacting factors. Jowett and Poczwardowski's (2007) integrated research model of the coach–athlete relationship offers a valuable framework for studying these relational dynamics, providing a clear pathway for future research in this area (see Figure 1). Their conceptual model has been deductively derived from well-established psychological theories, including interpersonal theory (i.e., personality development and an individual's behaviour are closely linked to how a relationship is shaped; Kiesler 1997), interdependence theory (i.e., the process by which interacting people influence one another's experiences; Kelley & Thibaut, 1978) and the relational-cultural theory (i.e., all people seek connections; Jordan et al., 1991). In addition, it incorporates and builds on previously established coach-athlete models. For example, Wylleman's (2000) conceptualisation of the coach-athlete relationship was based on observing behaviours of coaches and athletes on the sporting field. These behaviours were categorised into three dimensions: an acceptance-rejection dimension that describes a positive or negative attitude towards the relationship; a dominance- submission dimension that reflects a strong or weak position in the relationship; a social-emotional dimension that refers to taking a social or a personal role in the

relationship. LaVoi (2004) highlights the importance of closeness and the interdependent nature of the coach-athlete relationship, which is emphasised in four ways: authenticity (i.e., a person's genuine self-expression in the relationship that is respectful of the partner), engagement (i.e., commitment and responsiveness), empowerment (i.e., being strengthened, encouraged), and ability to deal with difference and conflict (i.e., embracing and building on diversity). Their work demonstrates how these qualities are established through sociocultural norms and rules. Poczwardowski (1997) proposed a framework to investigate the process and the context of coach-athlete dyads in a gymnastic team. Interpersonal variables were examined through personality traits, interpersonal needs, acts, and activities, as well as interpretation of interpersonal behaviours and meaning attached to the relationship. The interpersonal variables that emerged from this fieldwork included relationship roles, interpersonal interaction, relationship in terms of rewarding outcomes and negotiations. These highlight how the coach-athlete relationship is an interrelated exchange manifested through meaning or care for one another. Jowett and Poczwardowski's (2007) integrated research model incorporated the main assumptions from previous conceptual models: for example, LaVoi's (2004) application views closeness and connection as a major relationship quality for personal growth and development. In a similar vein, closeness is included in the Jowett et al. (2005) model and the Poczwardowski et al.'s (2002) model, which includes care. Although there are subtle conceptual differences between these models, there remains an agreement that the coach-athlete relationship is interdependent, whether it is being referred to as closeness, connectedness, or care. Therefore, to incorporate all these differing elements, their integrated research model was constructed into three layers.

The first layer acknowledges that the coach-athlete relationship is systematically influenced by antecedent variables, which include individual differences (i.e., personality), sporting cultures (i.e., sporting norms), and relationship characteristics (i.e., relationship duration). These three classes of causal condition are important in determining the quality of the coach-athlete relationship, as these variables are responsible for regularities in the interaction patterns within a dyad. The second layer of the model delineates the quality of the coach-athlete relationship, involving the main components of relationship quality: closeness, commitment, and complementarity (Jowett, 2007). The final layer of the model proposes three relationship outcomes

of intrapersonal variables that would include: personal satisfaction with performance or training; interpersonal variables, which would include both athlete's or coach's health; and perceptions of team cohesion and role clarity, which would result in group-outcomes. Within the model, it is postulated that the antecedent variables such as coaches and athletes' age, gender or personality will affect the quality of the relationship in terms of their levels of closeness, commitment and complementarity experienced. This will in turn will affect the relationship outcome of intrapersonal, interpersonal, and group outcomes (Jowett & Poczwardowski 2007). Communication can be viewed as the bridge between the extent to which the coach-athlete relationship can become distant or closer across all three layers of the model. This is based on research by Jowett (2003) which suggested that a lack of communication could ultimately lead to relationship breakdown in a coach-athlete dyad. The implication of having an established and robust framework is that it will provide an impetus for research that would support a greater understanding of the coach-athlete relationship. This can help to unearth the processes that regulate intrapersonal components, such as athletes and coaches' feelings, thoughts and behaviours, fundamental interpersonal components that influence relationship outcomes

Figure 1

Integrated Research Model of the Coach-Athlete Relationship (Jowett & Poczwardowski 2007)

Coaches and Athlete's		
Individual difference characteristic Age Gender Experience Personality (egotism, need for control, depression)	**Wider social-cultural-sport context** Culturally defined norms Customs Norms Roles Sport context in culture	**Relationship characteristics** Relationship type (typical versus atypical) Relationship duration Relationship transition Same or other sex relationship.

⇓

Interpersonal Communication

⇓

Coaches and Athlete's		
Feelings Closeness Care Socio-emotional Connection	**Thoughts** Commitment Co-orientation (perceptions) Meaning (interpretations)	**Behaviours** Complementarity (correspondence and reciprocity) Interactions

⇓

Interpersonal Communication

⇓

Coaches and Athlete's		
Intrapersonal Outcomes Satisfaction (self) Positive or negative affect Motivation Sports Performance	**Interpersonal outcomes** Satisfaction with relationship Conflict Stability and maintenance	**Group Outcomes** Team cohesion Role clarity or ambiguity Social Acceptance Popularity

1.1.3 The Landscape of Research into the Coach-Athlete Relationship

1.1.3.1 Factors Influencing the Coach-Athlete Relationship

Research continues to utilise Jowett and Poczwardowski's (2007) integrated research model by focusing on the identified antecedent variables that influence the quality of the coach-athlete relationship and the 3+1Cs. Relationship length has been shown to impact the coach-athlete relationship across different sporting levels. For example, Jowett and Gale (2002) found that athletes and coaches who had been in a relationship for more than 4 years exhibited a higher level of commitment to each other than those athletes and coaches whose relationship was less than 3 years old. This finding was reinforced by Jowett and Nezlek (2012) who investigated what moderated the relationships between coach–athlete interdependence and satisfaction with British athletes and coaches (N = 276; 186 males and 90 females) representing 138 coach – athlete dyads. In addition, dyads who had been working together for a shorter time were less reliant on each other than dyads with more established, longer relationships. Therefore, due to the impact of relationship length on the quality of the coach-athlete relationship, it has been recommended that participants selected for empirical study should have been in the relationship for a minimum of six months, to ensure it has been sufficiently established (Jowett, 2006). Competition level also appears to be important when considering the coach-athlete relationship. For instance, dyads are less reliant on each other and less satisfied with training, instruction, and personal treatment when operating at a lower level (i.e. club) when compared to higher level dyads (i.e., regional, national, and international). This might be explained by the fact that in high level competitions, the coach-athlete relationship is often seen as a crucial source of support during intense, stressful, and high challenging situations. Ultimately, this demonstrates the necessity for research to consider the length of time the coaches and athletes have been working together and their current competition level as both factors can influence relationship quality.

The coach-athlete relationship flourishes when coaches and athletes operate effectively within their psychosocial environment. Coaches and athletes naturally have clear and defined roles within their relationship, which creates a set of conscious or unconscious rules about how to operate together and provides a guide for their professional conduct. Jowett and Carpenter (2015) interviewed 30 coach-athlete dyads and found that rules can minimize potential sources of conflict

and provide opportunities to increase an exchange of rewards. Overall, the findings suggested that an emphasis on enhancing rewards (e.g., learning skills, improving performance, feelings of satisfaction) and minimizing conflicts (e.g., misunderstandings and/or disagreements) through the application of task-related and interpersonal-related rules (e.g. trusting and respecting each other) meant that the quality of their coach-athlete relationships was maintained, and that coaches and athletes could focus on enjoying making progress in their sport together. Moreover, it was found that closeness, commitment and complementarity, as well as communication, may naturally contain "ingredients" that serve as rules in themselves: for example, if a coach and athlete agree to respect each other by arriving to training on time, the rule of "being on time" results in greater complementarity and closeness because the coach and athlete are demonstrating and continuously providing examples to each other of how they are respecting their relationship. Thus, the importance of the 3 + 1Cs as a way of understanding how the coach-athlete relationship manifests in the world can be seen.

Research findings have also shown the influences of individual differences, such as gender, on the quality of the coach-athlete relationship. Jowett and Nezlek (2012) demonstrated that interdependence and sport-related satisfaction was greater in same-gender dyads (all male and all female dyads) than other-gender dyads (female coach-male athlete/ and male coach-female athlete). They found that all-female dyads were more satisfied with training and instruction than the other gender combinations considered together. This finding may highlight, at least in part, the importance of similarity in two-person relationships (Byrne et al., 1986; Wright, 1982). In addition, Gosai et al. (2021) investigated coaching behaviours of male coaches when coaching either male or female teams. Their findings showed that male coaches organise practice sessions (e.g., longer sessions for female than male athletes) and manifest coaching behaviours (e.g., more reinforcement for female than male athletes) that are different depending on whether they are coaching teams that comprise of male or female athletes. They highlighted those male coaches felt their female athletes valued the coach-athlete relationship more than male athletes as it provided them with an opportunity to engage socially in training, which in turn enhances athletic progress and subsequent performance. Norman (2015) also highlighted that the gender of athletes and indeed coaches is often treated as a variable and is therefore not problematised. However, according to the study

which focused on the coaching preferences of female athletes within the elite coach-athlete dyad, through interviewing 27 current high-performance female athletes, four major coaching needs were found. These were: the need to be supported as a person as well a performer; the need to be coached in a way that made them feel like it was a joint endeavour; the need for positive communication; and, finally, recognition of the salience of gender within the coach-athlete dyad. Therefore, to create an effective coach-athlete relationship, there is a need to consider how individual differences, such as gender, can influence the way in which coaches and athletes will approach training and performance.

Finally, personality is an important antecedent to consider when trying to understand how the coach-athlete relationship functions. How a coach and athlete achieve their individual or combined goals is dependent on how successful these two personalities interact within the relationship. This is because the individual personalities will interdependently shape the emotions, cognitions, behaviours and opinions of both individuals and, thereby, significantly enhance their performance (Jowett & Clark-Carter, 2006). Personality research has provided an empirically derived definition to help support the understanding of how a coach and athlete think, feel and behave with one another through robust psychometric measurement tools. Therefore, the coach-athlete relationship literature to date has demonstrated a clear linear association between a coach and athlete's personality and their relationship quality (Aşçi et al., 2015; Jackson et al., 2011; Jowett et al., 2012; Yang et al., 2014). The majority of research focuses on broad personality constructs, such as the Big Five (McCrae & Costa, 1987), but the understanding of traits such as narcissism, perfectionism, and alexithymia is still unknown and warrants investigation. Poczwardowski et al. (2006) has highlighted a need for diversifying the methodological approaches within the literature. In addition, personality research in general, and the work that has investigated the role of personality in coach-athlete relationships, has predominantly used quantitative approaches in isolation. Expanding methodological approaches using qualitative investigation, mixed method designs, and longitudinal approaches would enhance our knowledge within both areas (i.e., personality and coach-athlete relationship literature) by offering a deeper, context-specific understanding of the role of personality traits in this context. A more detailed review of personality and the coach-athlete relationship will be discussed in later sections.

1.1.3.2 Relationship Outcomes in the Coach-Athlete Relationship

The quality of the coach-athlete relationship has been linked to a number of outcome variables that impact intrapersonal, interpersonal, and group-outcomes. Li et al. (2021) examined the links between the intrapersonal outcome of satisfaction and the role of trust, which is aligned to closeness within 3 +1Cs (Jowett, 2009), with 223 footballers in a youth football team setting. They found that the athlete felt more trust toward their coach, which led to greater satisfaction and a higher reported quality of the coach-athlete relationship. In addition, Li et al. (2021) also investigated the impacts of coaches autocratic or democratic leadership styles on the coach-athlete relationship, illustrating that a coach adopting a democratic leadership style resulted in greater levels of motivation and satisfaction within the athletes they were working with, while autocratic leadership had no direct effect. Lorimer and Jowett (2009) investigated the empathic accuracy (i.e., accuracy of an individual's moment-to-moment perception of the psychological condition of another; Ickes, 2001), of 60 coach-athlete dyads, along with meta-perceptions of their relationship and perceptions of satisfaction. The dyad members were asked to report their recollected thoughts and/or feelings while making inferences about video clips containing the dyad's interactions during a typical training session and what their partner's thought and felt at specific points of interaction. The findings showed that increased empathic accuracy was in turn associated with higher levels of satisfaction. Therefore, improving the alignment between coaches and athletes' ability to understand the concerns and the views of each other more effectively (i.e., co-orientation) would lead to a stronger coach-athlete relationship and greater overall relationship satisfaction. Coaches and athletes are more satisfied within their relationship if mutual trust (i.e., closeness) and understanding (i.e., co-orientation) can be developed. Furthermore, the coach-athlete relationship has been shown to positively impact overall sporting performance in athletes: the greater the quality of the coach-athlete relationship, the higher likelihood performance goals will be achieved. Davis et al. (2018) measured physical performance using a 5-metre multiple shuttle test, followed by a Stroop test to assess cognitive performance in 82 athletes, including 55 males and 27 females, with a mean age of 19.87 years. All the athletes were actively competing in team sports at a university level. Participants provided saliva samples measuring cortisol as a biomarker of acute stress response and completed questionnaires measuring exhaustion (i.e., Athlete Burnout

Questionnaire; Raedeke & Smith, 2001), and coach-athlete relationship quality (i.e., CART-Q; Jowett & Ntoumanis, 2004). Their findings demonstrated a positive relationship between the quality of the coach-athlete relationship and Stroop performance, and negative relationships between the quality of the coach-athlete relationship and cortisol responses to high-intensity exercise, cognitive testing, and exhaustion. However, coach-athlete relationship quality did not predict participants' performance on the physical task (i.e., total distance accrued on the shuttle test). These findings highlight that when athletes perceive their coach-athlete relationship to be of a higher quality, they perform better in the cognitive aspects of sports performance, meaning they are more likely to remember the coach's instructions and how they wanted them to play (i.e., the game plan) or think through problems together more effectively (i.e., how to improve poor performances). Building on the link between the quality of the coach-athlete relationship and sporting performance, Phillips et al. (2023) demonstrated that the quality of the coach-athlete relationship predicted objective performance in 53 professional cricketers. They found that the quality of the coach-athlete relationship resulted in higher levels of batting performance (i.e., how frequently they would connect with a shot). Commitment and complementarity within the coach-athlete relationship were shown to significantly predict cricket shot execution performance. These findings indicate that the coach-athlete relationship has a clear link to sporting performance. However, as both studies were completed at a single time point, further investigation into the long-term effects of the relationship and performance is warranted (Tshube & Hanrahan, 2018).

Interpersonal outcomes from the quality of the coach-athlete relationship have focussed predominantly on conflict, stability, and maintenance. Despite the potentially central role of interpersonal conflict in sport, research remains limited on the nature of conflict in the coach-athlete relationship (see Wachsmuth et al. (2018) for a full review of conflict in the coach-athlete relationship). Wachsmuth et al. (2018) explored the characteristics of conflict in the coach-athlete relationship, focusing on the experiences of both coaches and athletes during conflict, as well as their emotional cognitive and behavioural responses. The study involved 22 coaches and athletes. Findings illustrated blaming the conflict partner was part of an escalating response linked to negative hard emotions (e.g., feeling angry) and aggressive behaviours (e.g., yelling), which, in turn, intensified and prolonged conflict within the dyad. Overall, as the coaches are generally

acknowledged to be the more knowledgeable and experienced leaders within the dyad, they become central to managing the conflict due to the power differentials and cultural norms (see factors influencing the coach-athlete relationship section of this review). Therefore, coaches were expected to take the first step towards resolution and were held responsible for aiding athletes through conflict by being in control of their own emotions, co-regulating athlete's emotions as well as responding empathically in a given situation (Wachsmuth et al., 2018). Further research has suggested that this can be best achieved through communication that focuses on conflict management (Davis et al., 2019). As a result, it can be concluded that achieving positive coach-athlete interpersonal relationship outcomes is reliant on understanding how antecedent factors from both coaches and athletes influence interactions, which in turn shapes their relationship positively or negatively. It is also important to explore how these interactions foster positive communications and elevate levels of closeness commitment and complementarity.

Group outcomes explicitly related to team cohesion (i.e., tendency for team members to stick together and remain united in the pursuit of achieving goals as well as satisfying members' emotional needs; Carron et al., 1985) have been investigated within the coach-athlete relationship. Hampson and Jowett (2014) examined the independent and combined effects of coach leadership and coaching relationships on team efficacy (i.e., individual perceptions toward the team's capabilities; Bandura 1997) with 150 sport performers from football teams across a range of competitive levels. Perceptions of both coach leadership and the coach–athlete relationship predicted variance in team efficacy. Overall, the findings suggest that the quality of the coach–athlete relationship added to the prediction of individuals' collective efficacy beyond what was predicted by coaches' behaviours of leadership alone. It has been demonstrated that emotional commitment, coach training, and instructional behaviour increased the team satisfaction for both elite and non-elite youth athletes. Moreover, the team satisfaction of elite youth athletes increased with the level of camaraderie, whereas that of non-elite youth athletes increased with positive feedback from coaches (Shang et al., 2018). As the quality of the coach-athlete relationship plays a pivotal role in the wider outcomes of a group or team, fostering a positive coach-athlete relationship is not only beneficial at a dyadic level but also at a wider team level. To ensure

successful outcomes, coaches and athletes should focus on creating positive one-to-one interactions which are beneficial to the wider group and team functionality.

1.1.4 Personality: An Interesting Avenue of Research

An individual's personality is measured through the structure of their unique characteristics, which is displayed through their individual thoughts, feelings, and behaviours (Larsen & Buss, 2017). Personality research, and its associations with important personal, interpersonal, and social behaviours, is as popular today as it ever has been (for a review of personality in sport see Allen et al., 2013). Within sport, personality has been a central aspect of sports psychology since it was established as a discrete branch of applied psychology in the 1920s (Griffith, 1930). The coach-athlete relationship is a dyadic relationship consisting of two personalities converging with continuous reciprocal interactions (Zayas et al., 2002). Whilst personality has been identified as an antecedent variable by Jowett and Poczwardowski (2007), our understanding of how this impacts the quality of the coach-athlete relationship remains limited. Yang and Jowett (2016) concluded that "further research is warranted to explore the relative contributions of personality factors to the quality of the coach-athlete relationship and to explore the way in which personality influences relationship quality" (p. 59).

1.1.5 Theories of Personality

Personality theory has an extensive history with comprehensive accounts of personality structures being found in the works of Hippocrates (460-370 BC), who claimed such things as the colour of a person's bile after death was linked to their levels of impulsiveness. Today, research investigates personality from several perspectives. These range from the viewpoint that an individual's personality is formed internally (i.e., psychodynamic approaches) to solely focusing on how a particular situation or environment results in an individual's personality development (i.e., situational approaches). Whilst these viewpoints encompass a continuum of internal and external drivers on a person's personality, in sports psychology the trait approach is most commonly used. This approach, as defined by Roberts (2009), refers to relatively enduring, automatic patterns of thoughts, feelings, and behaviours that are distinctive to an individual and expressed in specific environments. One of the most widely recognised trait models is the Big Five personality model (McCrae & Costa, 2008), which has been applied to various areas in sport, including coping

strategies (Allen et al., 2011), performance levels (Waleriańczyk, 2021), exercise participation (Allen & Laborde, 2014), and team effectiveness (Driskell et al., 2006). The Big Five personality model consists of five traits: agreeableness (i.e., altruistic, trusting, tenderminded, cooperative, and collegial in nature,); conscientiousness (i.e., reliable, diligent, organized, and disciplined); extraversion (i.e., active, outgoing, talkative, and sociable); neuroticism (i.e., anxiety, depression, irritability, and self-consciousness); and openness (i.e., open-minded, inquisitive, and unconventional).

Considerable research has focused on what personality traits coaches and athletes possess. For example, when comparing a range of personalities traits in different domains, elite sport coaches have been shown to demonstrate a recognisable set of dominant traits. Mallett and Lara-Bercial (2016) stated that serial elite winning coaches reported low levels of neuroticism and high levels of conscientiousness and extraversion. These underpinning traits, which were supported by additional reported interactions with athletes, illustrated that elite coaches are clear optimists and directed individuals, with a go-getting approach. This enables them to deal with stress in an adaptive manner, focus on problem-solving, and control their anger and frustration in the elite environment (Olusoga et al., 2012; Thelwell et al., 2008). In addition, Olympic winning swimming coaches were higher in agreeableness than non-winning coaches; it is thought that this trait facilitates better collaborations between coaches and athletes (Cook et al., 2021).

Differences in personality traits can be observed between non-elite, elite, and super-elite athletes. For example, when examining the differences between elite athletes competing at national and international level and non- elite athletes competing at university and club level, elite athletes showed higher levels of conscientiousness, agreeableness, and emotional stability (Allen et al., 2011). In a qualitative investigation of what differentiates successful British super-elite athletes from elite athletes, Hardy et al. (2017) found similar personality traits to those reported in serial elite winning coaches. Super-elite athletes, who they categorised as people who have won multiple medals at major championships, show the highest levels of conscientiousness and openness. Conscientiousness is extreme in super-elite athletes to the extent it becomes obsessive (extreme internal pressure) and perfectionistic (holding elevated standards or expectations), which are both

facets of this trait (Laborde et al., 2019). Coaches consider this trait to facilitate better quality of training and skill development (Tedesqui & Ottawa, 2020).

A trait approach is advantageous as it can provide insight into how people in different groups within sporting domains think, feel and behave in a sporting context (e.g., what makes elite coaches and athletes individually so successful). Trait approaches can also be advantageous when trying to investigate large groups of people. However, they only capture the intrapersonal nature and do not consider the particular situations that might also influence an individual or how trait interaction between individuals influences relationship quality and/or outcomes. Studying the role of personality from perspectives beyond the traditional quantitative approaches can provide a valuable insight into how the coach-athlete relationship functions, as each partner's personality can influence the other person by shaping the situation they find themselves in (Roberts et al., 2018). In other words, the effect of a coach's personality will depend on the unique traits of their athletes, and vice versa. In order to fully understand the coach-athlete relationship, it is important to consider the traits of both individuals within the context or situation the relationship occurs (i.e., an interaction approach). This perspective states that an individual's personality is the combination of their traits and the situation they encounter (trait + situation = behaviour; Bower 1973). When in a coach-athlete relationship, each relationship partner's traits can serve as the situation for the other person. For example, Davydenko et al. (2020) demonstrated that in dyads a partner will perceive more positive verbal and non-verbal social behaviours the more extroverted an individual is. This evokes positive social behaviours in return, resulting in continuous positive interactional feedback loops. Therefore, an interactional approach considers the situation and the person as co-determinants of behaviour and should be adopted when trying to understand the role of personality within the coach-athlete relationship.

1.1.6 Personality in the Coach-Athlete Relationship

Guided by Jowett and Poczwardowski's (2007) integrated research model, Jowett et al., (2012) investigated the linear associations between Goldberg et al.'s (2006) five personality factors (i.e., extroversion, agreeableness, conscientiousness, emotional stability and intellect), relationship quality, perceptions of coach empathy, and satisfaction with training. They examined 178 athletes aged 18 to 38 years (Mage = 20.40, SD = 2.79) performing in a range of sports (i.e., rugby, golf,

gymnastics, martial arts etc.) at various competitive levels (i.e., 34 % at an international level, 42% at a national level, 10% at a regional level and 14% at a club level). Their aim was to assess the link between antecedent variables (i.e., personality traits), relationship quality (i.e., closeness, commitment, and complementarity), and relationship outcomes (i.e., intrapersonal outcomes). Participants were asked to complete a series of questionnaires that measured the quality of the coach-athlete relationship (CART-Q; Jowett & Ntoumanis, 2004); levels of respect, empathy, and the unconditionality in a partnership (Lennard Empathy Scale; Barrett-Lennard, 1962); and satisfaction in training (Satisfaction Questionnaire; Riemer & Chelladurai, 1998). The findings demonstrated only less agreeable athletes are likely to have a poor relationship quality. This was explained due to such athletes having egocentric and sceptical tendencies towards their coach, affecting the level of empathy and mutual understanding within their relationship. In addition, empathy was identified as an important mechanism linking relationship bonds and satisfaction within training for athletes. Aşçi et al. (2015) demonstrated that lower levels of neuroticism and higher levels of extraversion were significant positive predictors of the support dimension of coach-athlete relationships in both team and individual sport athletes. Furthermore, the analysis indicated higher levels of conscientiousness resulted in lower levels of conflict experienced. These findings indicate that an athlete's personality characteristics may be important in determining the quality of the coach–athlete relationship. However, these studies are limited by the fact that they do not consider the interdependence between the coach and athlete's personalities within the dyad as they only account for the athlete's own personality factors on their own relationship quality.

To address this limitation, Yang et al. (2015) investigated the effects of the Big Five personality traits on the quality of relationship and satisfaction in 350 Chinese coach–athlete dyads. They specifically used the Actor-Partner Independence Model (APIM; see Figure 2, Cook & Kenny, 2005). Fonteyn et al. (2022) recommend this approach when studying dyads as the APIM approach considers the interdependencies between both members by modelling the associations of each person's own personality on their own relationship outcome (e.g., actor effect) as well as on the partner's relationship outcome (e.g., partner effect). Yang et al. (2015) illustrated that lower levels of neuroticism and greater levels of extraversion and conscientiousness independently resulted in higher relationship quality (actor effects) for both coaches and athletes. Partner effects (i.e., how an

individual's own personality will predict his or her partner's perceptions of relationship quality) of only athletes' personality, namely, higher levels of conscientiousness and extroversion, and lower levels of neuroticism, impacted their coaches' perceptions of relationship quality. No significant partner effects of a coach's personality on their athlete's relationship quality were recorded. These findings identified key personality traits that contribute to how coaches and athletes interact in the elite environment for both team and individual sports and how this impacts the quality of their relationship. The exclusive use of quantitative methods in the study does not provide evidence of how these perceptions are formed: for example, it may be that a coach's perception of their athlete's personality was solely related to their own trait levels.

Figure 2

The Actor-Partner Interdependence Model, APIM (Cook & Kenny, 2005)
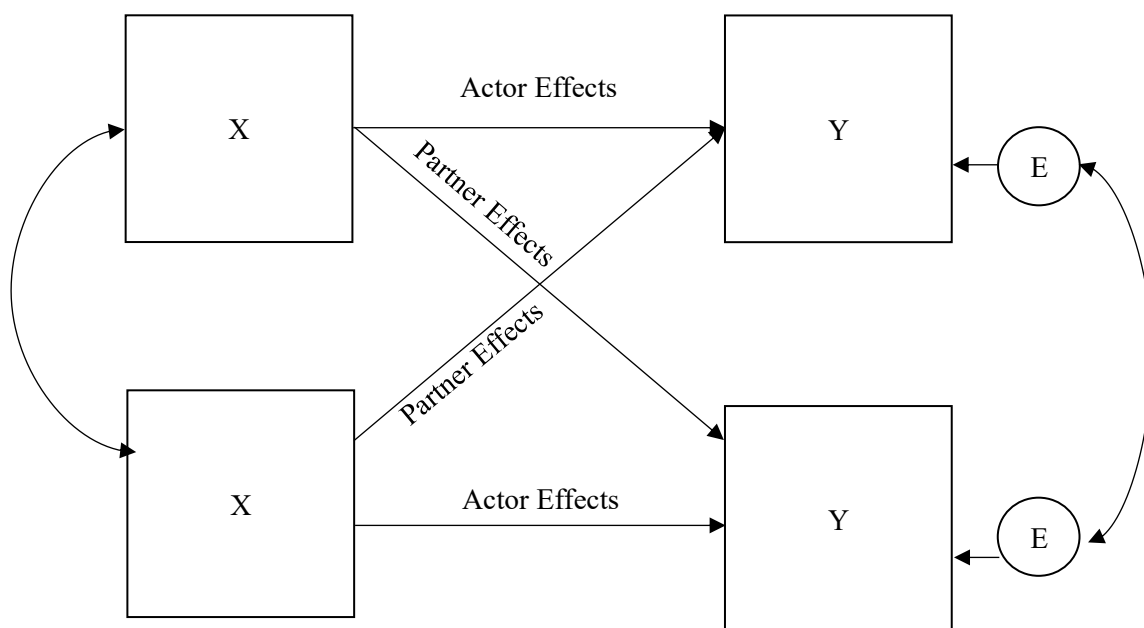
1.1.7 Personality Similarity in The Coach-Athlete Relationship

The concept of personality similarity (i.e., the extent to which individuals within a dyad have similar or dissimilar levels of specific traits) has long fascinated relationship researchers and is an interesting avenue to consider when trying to further understand the role of personality in the coach-athlete relationship. Seminal work focussed on the interpersonal attraction of two people's personality traits across a range of social settings, such as school children (Yeong Tan & Singh,

1995) or couples (Murstein & Beck, 1972). Research in this area focussed on how similar personality characteristics and values enhanced the quality of the relationship by emphasising the concept of similarity-attraction (e.g., we are attracted to people we are similar to; Byrner, 1997). This foundational work led to further exploration of how personality affects social behaviours and relationship formation and has contributed to the understanding of interpersonal relationships in psychology. Research in psychology has extensively investigated the role of personality similarity and identified benefits as to how a relationship can function positively, including decreased disagreements (Rammstedt et al., 2013), enhanced perceptions of a partner's emotions (Anderson et al., 2003), and relationship longevity (Arran-Becker 2013). Yet, personality similarity has also been shown to result in poor interactions in dyads composed of individuals who both had a dominant disagreeable trait (e.g. low in agreeableness). It has been suggested that this is because when both participants were disagreeable, they disclosed less personal information about themselves, used fewer verbal acknowledgments, and reported a relatively low sense of rapport with each other (Cuperman & Ickes, 2009). These findings were based only on initial interactions; a coach-athlete relationship will last for multiple interactions during the span of the relationship. However, while sport science has often been intrigued by the idea of compatibility between coaches and athletes (Carron & Bennett, 1977; Horne & Carron 1985), there are very few empirical studies that focus of the role of personality similarity in the coach-athlete relationship and how this can positively or negatively contribute to the idea of compatibility within a dyad. A notable exception is the work of Jackson et al., (2011), who investigated quantitatively how the Big Five traits and similarity in these traits shape the quality of the coach-athlete relationship. They focussed on commitment (i.e., how dedicated the coach and athlete are to each other) and relatedness (i.e., how trusting the coach and athlete are of each other) within 91 established coach–athlete dyads competing at a regional level. Analysis was conducted using the APIM so that the effects of individual's traits in relation to their own (actor effects) and their partner's commitment and relatedness (partner effects), and the extent to which coaches and athletes were dissimilar on the Big Five constructs could be examined. The results showed that greater dissimilarity between coach's or athlete's extraversion and openness was associated with reduced commitment and relatedness in the relationship. Higher levels of agreeableness, conscientiousness and extroversion

resulted in greater commitment, and higher levels of agreeableness and extroversion resulted in greater levels of relatedness within the dyad. Furthermore, partner effects revealed that dyad members reported higher levels of commitment and relatedness when their partner was highly conscientious and/or agreeable. However, again, this work adopts a quantitative approach which provides little insight into how an individual's thoughts and feelings influence their own perceptions, experience, and quality of their relationship.

To address this limitation, Stanford et al. (2022) adopted a mixed-methods approach to investigate the extent to which the Big Five personality traits related to perceptions of relationship function in three elite-coach-athlete dyads. This study included participants completing quantitative questionnaires on their own personality and meta-perspectives (i.e., their partner's personality) of the Big Five traits before participating in individual, semi-structured interviews to see how these traits influence their perceptions, experience, and quality of their relationship. Thematic analysis conducted on the qualitative data highlighted three higher-order themes. *Perceived compatibility* demonstrated that coaches and athletes both felt that their partner was the best person to enable them to achieve their sporting goals. This theme also highlighted that personality similarity provided a sense of compatibility within the relationship. *Collective personality* referred to each coach and athlete bringing their own unique personality to the relationship. The theme of *Personality persona* denoted the idea that both coaches and athletes display a particular set of behaviours which they want their partner to recognise in them. Whilst this study highlighted the significance of coaches and athletes understanding both their self and their partner's personality traits for relationship success, it also suggested that both similarity and complementarity in traits can be beneficial in the coach-athlete relationship.

1.1.8 Moving Beyond Broad Personality Traits

The literature examining the role of personality in coach-athlete relationships in sport has predominantly focused on broad personality traits (i.e., the Big Five; McCrae & Costa, 2008). The Big Five framework has been so prevalent because it has provided researchers with an empirically derived definition of overarching personality traits, a comprehensive collection of characteristics and attributes that fall within each of the 'Big' Five constructs, and a psychometrically robust measurement tool. However, a broad approach limits the current understanding of how personality

influences the coach-athlete relationship as it fails to account for the unique dynamics of the sporting environment. For example, it overlooks the need for athletes and coaches to collaborate effectively in often unpredictable, high-pressure situations where individuals are trying to achieve optimal performances in constantly changing conditions (i.e., winning). Over recent years, there has been an impetus to move on from such a broad approach to personality traits towards interrogating other traits that might be highly relevant within sport (Roberts & Woodman, 2017). Exploring the personality traits of narcissism, psychopathy, and Machiavellianism, known as the Dark Triad, is a new and interesting avenue of research.

While often viewed negatively in the general population, the Dark Triad traits may offer certain advantages in sporting contexts. These traits have been associated with enhanced competitive drive and superior performance (Vaughan & Madigan, 2021), and they appear to be more prevalent in elite athletes compared to non-elite counterparts (Vaughan et al., 2019). However, despite their potential contribution to performance success, Dark Triad traits have also been linked to behaviours considered undesirable in sport. For instance, psychopathy and narcissism have been found to predict favourable attitudes towards doping, and narcissism has been identified as a positive predictor of cheating (Nicholls et al., 2020). Psychopathy and Machiavellianism have also been shown to significantly predict aggression in athletes (Bryan et al., 2023). Beyond sport, these traits negatively impact interpersonal relationships, being associated with controlling and threatening behaviours (Brewer et al., 2018), impulsivity and sensation-seeking (Crysel et al., 2013), and lower levels of relationship satisfaction and commitment (Smith et al., 2014). Therefore, although the Dark Triad may enhance competitive edge, it can also pose challenges to healthy relational functioning.

These challenges are particularly relevant in the context of coach-athlete relationships. Dark Triad traits in a relationship context have been linked to low empathy (Jonason & Krause, 2013), dominance-seeking (Semenyna & Honey, 2015), and power motivation (Jonason & Ferrell, 2016). Although each trait is distinct, they are moderately interrelated and tend to interact in ways that foster manipulative, exploitative, and self-serving behaviours, largely due to their shared foundation in disagreeableness in the Big Five (Paulhus & Williams, 2002). In high-performance sport environments, characteristics such as intense competitiveness and a win-at-all-costs mentality

can reinforce hierarchical dynamics and an overemphasis on outcomes. While this may yield short-term success, it often comes at the cost of open communication, emotional regulation, and mutual trust. Coaches who prioritise winning above relational quality may overlook the developmental needs of athletes, undermining collaboration, empathy, and psychological well-being. As a result, strained relationships, athlete burnout, and reduced long-term motivation may emerge, ultimately affecting both performance and personal development. It is therefore important to investigate how these traits independently and collectively contribute to building an affective coach offering relationship.

Individuals high in narcissism have a self-centred, self-aggrandizing, entitled, dominant, and manipulative interpersonal orientation (Morf et al., 2001). A performance environment can suit individuals high in narcissism as it provides a multitude of opportunities to show the world their perceived excellence. For example, individuals high in narcissism perform significantly better when self-enhancement opportunities, such as an audience or public recognition, are present, illustrating that they will increase their effort to perform at a higher level to receive external admiration. Coaches who score high in narcissism have been positively associated with athletes producing faster end of season performances, because they provide athletes with a mindset that high-profile competitions are positive opportunities for self-enhancement (Nevicka et al., 2023). Individuals high in narcissism also have the propensity to believe they are supreme leaders. This perception may initially be supported by the group members but disappears over time (Ong et al., 2016). Whilst narcissism might be somewhat beneficial for an individual's performance level, it could hinder the quality of the coach-athlete relationship. In the initial stages of a relationship, an individual high in narcissism may seek to obtain admiration and therefore express self-assured, charming, entertaining, and assertive behaviours towards their dyadic partner (Back et al., 2013; Wurst et al., 2017). However, coaches who are higher in narcissism predominantly use a controlling interpersonal style (Matosic et al., 2020) as well as adopting socially insensitive, selfish, hostile, and aggressive behaviours in dyadic relationships (Song & Jeon, 2022). In addition, Olympic gold medal winning swimming coaches when compared to Olympic non-gold medal winning swimming coaches have been shown to have lower levels of narcissism (Cook et al., 2021). Collectively, this research suggests that high levels of narcissism from either partner within

a coach-athlete dyad may impact their overall relationship quality and performance outcomes. However, there have been no studies which have empirically examined this suggestion.

Considering the role of similarity and narcissism, perceived similarity has been tested through the lens of the narcissistic-tolerance hypothesis. This hypothesis states that narcissists tend to fraternise with other narcissists (Maaß et al., 2016), demonstrating that they are more tolerant and fonder of their narcissistic peers due to a perceived similarity (Hart & Adams, 2014). Narcissists report positively liking narcissistic behaviours and disliking non-narcissistic behaviours in others. Consequently, they become more tolerant of narcissistic behaviours within the relationship because they think they share the same perceived qualities (Hart & Adams, 2014). This perspective suggests that individuals with high levels of narcissism may not exploit their generally hostile or intolerant partners if they believe they share similar traits, which in turn results in higher relationship quality (Exline et al., 2004; Hart et al., 2017). However, the existing empirical literature primarily focuses on perceived similarity and does not address the effects of actual similarity. As a result, it remains uncertain whether the benefits of actual similarity in personality traits, previously observed in other contexts, would extend to narcissistic traits within the coach–athlete relationship.

It is important to consider the specific facets of narcissism and how they may influence interpersonal dyadic relationships. Five key dimensions of narcissism are commonly proposed in the literature: hypersensitivity, admiration, rivalry, maladaptive, and adaptive narcissism. Hypersensitive narcissism, or vulnerable narcissism, is characterised by emotional reactivity and defensiveness (Akhtar & Thomson, 1982; Ronningstam, 2011). Individuals high in this trait, whether coach or athlete, may react negatively to perceived criticism, which could result in withdrawal, passive-aggression, or a breakdown in trust (i.e., a coach reacting poorly to athlete feedback or an athlete shutting down in response to critique). Admiration, a facet of grandiose narcissism, reflects a strong need for validation and uniqueness (Back et al., 2013). Coaches and athletes high in admiration may appear confident, charismatic, and driven to impress (i.e., a coach using motivational language or an athlete thriving under public attention), but the longevity of these relationships may depend on whether this drive is directed toward shared goals or personal image. Rivalry, another aspect of grandiose narcissism, involves antagonism and hypersensitivity

to status threats (Back et al., 2013). When either partner perceives success as competition (i.e., a coach feeling threatened by a successful athlete or an athlete resenting a coach's dominance), tensions may emerge, potentially damaging collaboration and mutual respect (Matosic et al., 2020). Maladaptive narcissism, including entitlement and exploitation, may lead coaches or athletes to prioritise personal gain over the relationship (Song & Jeon, 2022). For example, an athlete may take credit for team success, or a coach may seek recognition at the expense of athlete development. Finally, adaptive narcissism, marked by assertiveness and confidence, may positively influence performance when paired with empathy and relational awareness (Roberts & Woodman, 2015).

Psychopathy is characterised by a lack of remorse or guilt as well as a difficulty in empathizing with others (Lilienfeld et al., 2015). In high-performance populations it has been shown that high achievers in various professions (including elite soldiers and company chief executives) are overrepresented among high psychopathic scores (Dutton, 2012). Psychopathic traits in athletes can manifest as hyper competitiveness, aggression, and a "win-at-all-costs" mentality (Colangelo et al., 2023). These traits may contribute to athletic success but can also lead to negative behaviours such as doping, cheating, and violence (Withers, 2015). There is some evidence that when a success-obsessed and self-focused performance director expresses elements of psychopathy, such as the use of derogatory or vindictive comments towards an elite athlete, it results in positive developmental characteristics, such as enhanced motivation, resilience, and coping strategies for the athlete (Arnold et al., 2018). Kardum et al., (2018) hypothesised that dissimilarity on psychopathy would have negative effects on both partners relationship quality. Using profile similarity and polynomial regression analysis of 100 young urban heterosexual couples who had been dating for an average of 3.5 years (SD = 3.76 years). Their findings demonstrated that higher psychopathy in men resulted in both women and men's lower relationship quality. Dissimilarity between partners in psychopathy related to lower women's relationship quality only. To date, it is believed this is the only study that investigates the role of actual similarity in romantic couples. Also, there remains limited research into the effect that psychopathy or similarity in psychopathy has on relationship function within the coach-athlete relationship.

Machiavellianism is the propensity to lie, manipulate, and exploit others (Charistie & Geis, 1970). Individuals high in Machiavellianism engage in several manipulative techniques to create positive relationships and achieve their goal. For example, they will use their ability to interpersonally manipulate their work supervisors to achieve an inflated rating of their job performance (Smith & Webster, 2017). These enhanced interpersonal abilities are most effective in stressful, unstructured, and face-to-face competitive situations where the individual's improvisation allows them to focus others' attention on their goals (Cooper & Peterson, 1980). Individuals high in Machiavellianism are most effective in small groups, where one-to-one interaction is predominant (Hacker & Gaitz, 1970), making this trait potentially highly relevant to performance dyadic relationships. For example, Cruickshank and Collins (2015) demonstrated that within elite sports team settings, head coaches generally adopted a Machiavellian approach to shape interpersonal relations so that they could further the interests and performances of the team because they felt that in their elite environment, the ability to strategically manipulate, as well as directly address, challenge, or confront athletes, was perceived to be a vital behaviour for elite team leadership. Individuals high in Machiavellianism assume they are like their partner; however, their assumed level is higher than their actual level of similarity across trait scores (Kardum et al., 2018). Little is currently known about this trait, or the effects that this trait similarity has on coach-athlete dyads. Therefore, research to understand if Machiavellianism affects dyadic relationship quality, and is exploited to ensure performance goals, or if it is reserved for individuals outside the coach-athlete relationship could be significant.

1.1.9 Limitations in Personality & Coach-Athlete Relationship Literature

The coach-athlete relationship research to date has extensively and systematically investigated the influence of antecedent variables: individual differences, wider social cultural and relationship characteristics, the quality of the coach-athlete relationship and how this impacts relationships outcomes i.e., satisfaction, stability, team cohesion (Jowett & Poczwardowski, 2007). The role of personality has started to emerge as a fruitful line of research to link the linear association between antecedent variables, relationship quality and relationship outcomes within the coach-athlete relationship (Yang et al., 2013). However, at present research tends to employ quantitative or qualitative methodologies in isolation. Mixed methodologies would support the

triangulation of data sources, and enable the generalisability of quantitative research (i.e., what is the normal way coaches and athletes interact) while simultaneously providing an understanding of how personality traits affect the levels of closeness, commitment and complementarity and the ways in which they contribute to overall relationship quality for coaches and athletes. Personality traits do not work in isolation: they are all present within an individual to a more or lesser degree at the same time (Stanford et al., 2022). Therefore, it seems appropriate to utilise multiple data sources (i.e., qualitative and quantitative) to triangulate data findings whilst still being faithful to the nuances of each individual data type, the individual's unique personality, and their relationship. Thus, this would contribute to a more comprehensive and accurate understanding of the role of personality in the coach-athlete relationship, offering a more complete picture of how this relationship operates and develops.

Moreover, current research predominantly relies on a cross-sectional approach, which has fails to capture the nuances between coaches and athletes longitudinally. Whilst research has highlighted the benefits of relationship length for the coach-athlete relationship (Jowett & Nezlek, 2012), to date it remains unknown how coaches' and athletes' personalities interact longitudinally and how this links to relationship and performance outcomes. A longitudinal methodological approach would provide a unique insight into the way in which the coach-athlete relationship, and how it is perceived, improves or declines throughout a season when it is exposed to the natural increases in pressure which are a consequence of attempting to achieve performance objectives. There has been a trend for practitioners and sport psychology consultants to adopt trait-based personality profiling (Burnell et al., 2023) with a view to enhancing the coach and/or athlete's awareness of their individual personality. However, the association between enhancing an individual's awareness and the impact on the coach-athlete relationship remains unknown and warrants investigation.

Finally, there remains limited evidence of how a coach's and athlete's personality, and their meta-perspectives of each other's personality impacts the quality of their relationship. Strategies have emerged to help develop and maintain effective coach–athlete relationships (i.e., COMPASS model; Rhind & Jowett, 2010), however it is only the 3 + 1Cs model itself that can guide practitioners to enhance the positive effect on the quality of the coach–athlete relationship.

Therefore, due to the key link between personality traits, the quality of the coach-athlete relationship and interpersonal outcomes, research should aim to develop an intervention whereby coaches and athletes are enabled to develop a higher quality relationship.

1.2 Summary and Impetus for This Research Programme

A growing body of research has demonstrated the impact that personality traits have on the intrapersonal, interpersonal, and group outcomes with the coach-athlete relationship literature. There are some questions which remained unexplored: for example, the literature has yet to consider personality traits which are potentially relevant to the environment of sport, for example the Dark Triad (narcissism, psychopathy, Machiavellianism). In addition, research has predominately investigated the role of personality by employing quantitative methodologies and has not yet incorporated other methodological approaches (i.e., qualitative investigation, mixed method design and longitudinal approaches) which could uncover novel insights and extend existing knowledge in the field, and thereby provide recommendations and guidance for coaches, athletes, and governing bodies on how to support an effective coach-athlete relationship. As such, drawing from the current coach-athlete and personality literature, the aim of the present thesis was therefore fourfold:

1. To explore the effects of alternative personality traits (i.e., narcissism, psychopathy, and Machiavellianism) in the coach-athlete relationship.
2. To examine how coaches and athletes understand each other's personality traits and how this impacts coach-athlete relationships.
3. To expand current approaches to personality research via utilising a mixture of methodological approaches.
4. To provide recommendations and guidance for coaches, athletes, and governing bodies on how to support an effective coach-athlete relationship.

1.2.1 Understanding the Role of the Dark Triad in Coach-Athlete Relationships

The aim within the first empirical chapter of this thesis (Chapter 2) was to understand how the Dark Triad Traits effect coaches and athletes' relationship quality. Current literature reports on broad personality constructs (e.g., the Big Five; McCrae & Costa, 2008). Given the nature of the

coach-athlete relationship being predominantly a sporting concept, it has been recommended to move beyond such traits and explore relevant traits for sporting domains (Roberts et al., 2007). Therefore, within this chapter the APIM in conjunction with similarity effects was utilised to investigate the role of the Dark Triad. Understanding the role of alternative personality traits and the effects of similarity in these traits strengthens the rationale for considering individuals' personalities within the dyad and the subsequent effects on the coach-athlete relationship as a whole.

1.2.2 Examining the Extent of the Influence of Similarity in Narcissism on Coaches Relationship Quality

In the second empirical chapter (Chapter 3), a study was conducted which sought to examine the extent to which a coach's own levels of narcissism influenced their perception of their relationship quality and, further, how similarity in trait narcissism influences a coach's perception of their relationship, using the 3 + 1Cs model (i.e., closeness, commitment, and complementarity). As narcissism has been shown to be a driving influential trait within sporting contexts (e.g., Roberts et al., 2018), it requires further examination within the coach-athlete relationship due to the potential detrimental or beneficial effects that could be had (e.g., performance enhancement through higher relationship quality or controlling interpersonal style resulting in lower relationship quality). Further, the degree to which a coach and athlete are similar in narcissism has yet to be explored. Therefore, this study employed a mixed method approach to investigating the role of narcissism in coaches' relationship quality.

1.2.3 Examining the Longitudinal Effects of a Phased Personality Informed Intervention to Support High-Performance Coach-Athlete Relationships

In the final empirical chapter (Chapter 4), an examination of how coaches and athlete's personalities impacted their relationship was carried out over an eight-month period. During this time, coaches and athletes were supported and educated to ensure they had an enhanced understanding of the role their own and their partner's personality had on their coach-athlete relationship. Research is yet to explore how interventions targeted towards dyadic personality meta-perspectives could aid coach-athlete relationship quality in high-performance domains. The research outlined in this chapter employed a mixed method approach, utilising personality and

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relationship assessments in conjunction with semi-structured individual, dyadic interviews, and daily observations in both training and competition settings. The intrapersonal, interpersonal, situational impacts and meta-perspectives of coaches and athletes' personalities and current relationships as defined by the 3 + 1Cs model then informed an individualised intervention, and practical recommendations were formed and actioned by each dyad.

1.3 COVID-19 Impact Statement

This PhD commenced in October 2019 which was 5 months prior to the Prime Minister announcing a national lockdown as a result of the coronavirus (COVID-19) pandemic. Consequently, leisure facilities closed across the United Kingdom alongside a cessation of all in-person research. Coaches' and athletes' ability to work together was restricted, due to many coaches being placed on the Government's furlough scheme by their employer: they could not undertake work for, or on behalf of, the employer's organisation, or any organisation linked or associated with the employer's organisation whilst being furloughed. Therefore, Chapter 3 was significantly impacted as a dyadic perspective could not have been ascertained, which would have provided a more rounded view of the coach-athlete relationship. Although the work presented in this chapter may not have been conducted in the same manner without the COVID-19 restrictions, it still provides a strong, novel, and substantial contribution to the wider literature, whilst also allowing this thesis to progress towards completion.

CHAPTER 2: "THERE'S ONLY ROOM FOR ONE OF US IN THIS RELATIONSHIP":

EXAMINING THE ROLE OF THE DARK TRIAD IN HIGH-PERFORMANCE DYADS[1]

Abstract

The Dark Triad is highly relevant in high-performance environments as it offers explanation for feelings of superiority, opportunities to be ruthless in the pursuit of victory, and a heightened belief of influence over others for individual success. High-performance dyads focus on achieving a collective goal to achieve additional individual glory. The aim of this study was to investigate how levels of these traits and (dis)similarity in them was associated with relationship quality of 316 high-performance dyads. Greater dissimilarity in narcissism resulted in higher relationship quality for both dyadic members. Actor effects indicated that higher levels of narcissism, psychopathy, and Machiavellianism were related to a reduction in coaches' own perceptions of relationship quality, whilst only higher levels of Machiavellianism were associated with a reduction in athletes' own perceived levels of relationship quality. Partner effects showed higher levels of athlete Machiavellianism reduced the relationship quality of coaches.

2.1 Introduction

Individuals who operate within high-performance settings are exposed to high-risk, high-stress and highly demanding environments (Molan et al., 2019). These occupations, such as, but not exclusively, fire and rescue, law enforcement, and elite sport, require individuals to work together effectively to produce optimal, predictable performances in often highly abnormal, unpredictable environments (Ungureanu & Bertolotti, 2020). Dyadic relationships influence performance by affecting intrapersonal feelings, interpersonal stability, and dyadic cohesion (Jowett, 2017), resulting in individuals having an intense desire to be victorious over others, exceed expectations, and/or experience heightened success above the norm. Therefore, high-performance environments can often attract people with the propensity to feel superior, be ruthless in pursuit of winning, and have a heightened belief they can influence others for their own success (Pegrum & Pearce, 2015; Schiffer et al., 2021; Vaughan & Madigan, 2021). Yet, little is known about how personality traits associated with these characteristics (i.e., The Dark Triad; DT) can impact relationship quality in high-performance dyads.

The DT are three interrelated but distinct personality traits (Paulhus & Willams, 2002). Despite the aforementioned potential advantages of the DT for performance outcomes in elite domains, high levels of narcissism (a trait associated with feelings of self-centeredness, self-aggrandizing, entitled, dominant, and a need to manipulate others; Morf et al., 2001), psychopathy (a trait associated with individuals not feeling remorse or guilt as well as a difficulty in empathizing with others; Lilienfeld et al., 2015), and Machiavellianism (a trait associated with a propensity to lie, manipulate, and exploit others for one's own needs; Charistie & Geis, 1970), may negatively impact interpersonal relationships. Although research demonstrates that the DT reflect a collection of socially malevolent traits in relationship settings (e.g., betrayal, exploitation), recent research also suggests that the DT may be beneficial in performance domains (Geukes et al., 2012). This potential positive impact of the DT can be explained by high-performance contexts being environments that provide individuals with continuous opportunities to show the world how good they are (see Roberts et al., 2018 for a review of narcissism within performance settings) and allow them to achieve superior performances due to their naturally more competitive orientation (Vaughan & Madigan, 2021).

High-performance relationships are unique because they have clear objectives intrinsically linked to measurable outcomes (e.g., becoming an Olympian). However, there is little evidence on how the DT impacts these types of relationships. Preliminary research has focused on the domain of high-performance sport. Cook et al., (2021) found that Olympic gold medal winning coaches, when compared to Olympic level coaches, have lower levels of narcissism. It could be that sports coaches higher in narcissism are using a controlling interpersonal style that could hinder both coaches and athletes' dyadic performance (Matosic et al., 2020). Even though relationships may not present with higher relationship quality, it is still possible to produce positive developmental outcomes for performance. For example, when performance directors' express elements of psychopathy, such as the use of derogatory/vindictive comments towards an elite athlete, it results in positive developmental characteristics, such as enhanced motivation, resilience, and coping strategies being acquired (Arnold et al., 2018). Machiavellian techniques have shown to be most effective in dyads where one-to-one interactions are used to create positive relationships (Hacker & Gaitz, 1970), comparable to an elite sport environment with coaches only working with a few athletes. Indeed, head coaches of elite teams have frequently demonstrated Machiavellian approaches to shape interpersonal relationships and performance (Cruickshank & Collins 2015). However, at present these studies do not consider the interdependence of dyadic relationships.

To build on the current DT literature, the coach-athlete relationship is the ideal context to examine the intrapersonal, interpersonal, and personality similarity associations in high-performance relationships. The most established model to understand coach-athlete relationships is the 3 + 1Cs relationship model (Jowett, 2007), whereby the quality of the coach-athlete relationship is defined as a situation in which coaches' and athletes' affective bonds (e.g., trust, "closeness"), cognitions (e.g., relationship maintenance, "commitment"), and behaviours (e.g., responsiveness, "complementarity") are interdependent. This process allows for the coach-athlete relationship to be based solely on a "give and take" co-operative approach. Therefore, this relationship is not as constrained by procedural (e.g., medical processes; Bozic et al., 2010) or hierarchical structures (e.g., military ranking systems; Browning, 1998) that could occur in other performance dyads. Consequently, the coach-athlete relationship relies exclusively on interpersonal thoughts, feelings, and behaviours of both members to achieve performance success (Phillips et al., 2023).

2.1.1 The Present Study

Given the relevance of the coach-athlete relationship when examining the DT in high-performance dyads, it provides an ideal context to examine how these traits interact. Yet, to date no study has examined the association between the DT and the quality of the coach-athlete relationship. The present study addresses this gap in the literature by examining how coach and athlete levels of DT traits, and the similarity in these traits, relate to their perceptions of the coach-athlete relationships. Based on the existing literature we formulated and tested two hypotheses: (i) higher levels of the DT would reduce coaches' and athletes' own and partner relationship quality; (ii) similarity on DT traits would reduce relationship quality in a current performance relationship (Figure 3).

Figure 3

Model Specification for the Three Traits with Trait Similarity and the DT of Both Partners as Predictors of Each Partner's Relationship
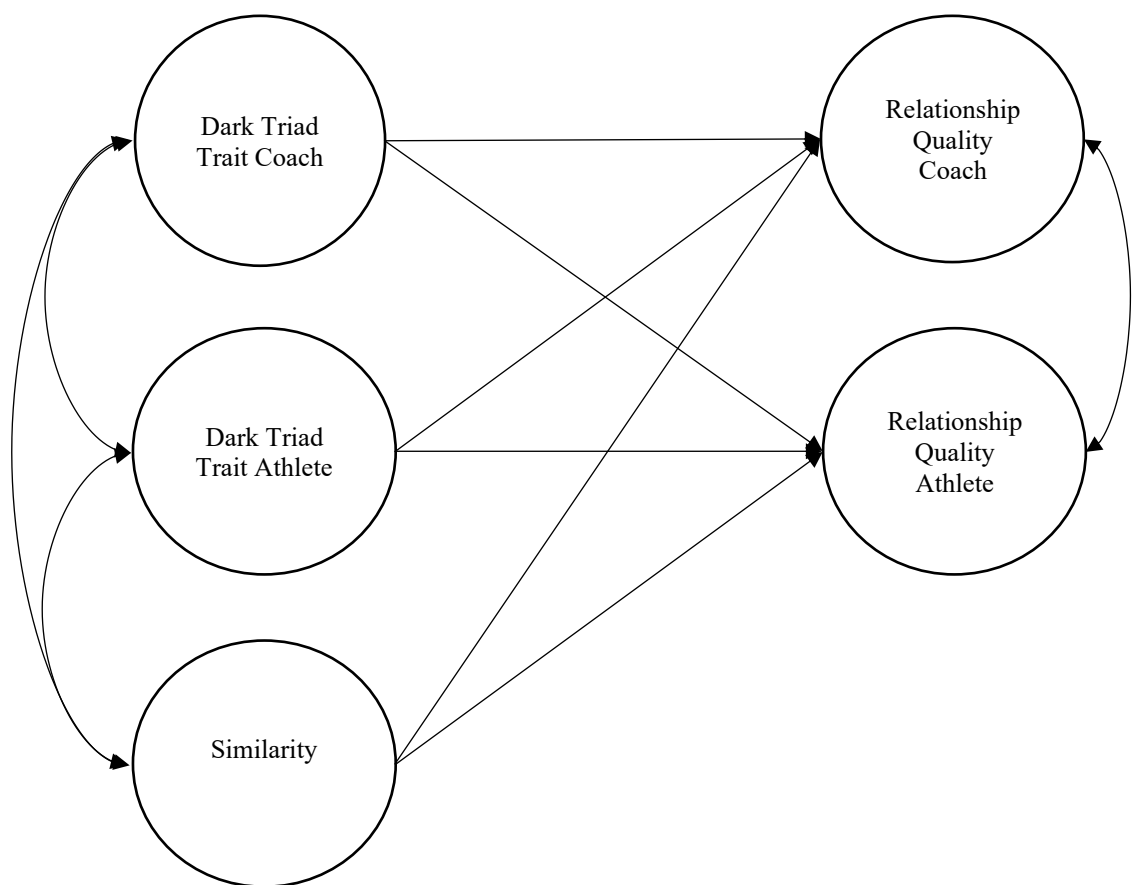
<center>**2.2 Method**</center>

2.2.1 Participants

A total of 316 coach-athlete dyads from three individual sports (Swimming = 158 dyads, Triathlon = 102 dyads, Cycling = 56 dyads,) participated in the study. Athletes reported competing at regional ($n = 56$), university ($n = 26$), national ($n = 102$), and international level ($n = 132$). The coach-athlete dyads consisted of 126 coach participants and 316 athlete participants resulting in mean score of 2.5 athletes per coach. As recommended by Jowett and Ntoumanis (2004), all participating dyads had been working together for a minimum of six months to ensure their relationship was established ($M_{relationship\ length} = 3.0 \pm 1.8$ years). Coaches had 15.2 years ($SD = 10.7$) coaching experience in their sport, with dyads working together for an average of 13.3 hours ($SD = 6.32$) per week.

2.2.2 Procedure

The study was approved by an institutional research ethics committee. Due to the coach-athlete dyad being of a hard-to-reach population, and coaches being gatekeepers to their athletes, coaches were initially contacted via email and were provided with information outlining the purpose and procedures of this research project. Coaches were asked to self-select a maximum of five athletes to participate in the study. Upon gaining informed consent from both coaches and athletes, they were asked to complete questionnaires which captured characteristics of the participant's personality and relationship quality through an online survey's platform (JISC; https://www.onlinesurveys.ac.uk).

2.2.3 Measures

2.2.3.1 Personality Traits

The Dark Triad Dirty Dozen (DTDD; Jonason & Webster, 2010) questionnaire measured three personality traits: narcissism, psychopathy, and Machiavellianism. Both dyadic members responded to statements that reflected narcissism (e.g., "I tend to want others to admire me"), psychopathy (e.g., "I tend to lack remorse"), and Machiavellianism (e.g., "I have used flattery to get my own way"). All items were rated on a 1 *(Strongly Disagree)* to 5 *(Agree Strongly)* Likert scale. Previous evidence supports the acceptable factorial validity and internal consistency (Spurk et al., 2016).

2.2.3.2 Relationship Quality

The Coach-Athlete Relationship Questionnaire (CART-Q: Jowett & Ntoumanis, 2004) assessed coaches' and athletes' direct perceptions of relationship quality. The CART-Q measures three positive dimensions of the relationship: closeness (affect), commitment (cognitive), and complementarity (behavioural). Closeness was measured via a three-item subscale that assessed the level to which a dyad member trusts, respects, and appreciates their partner (e.g., "I feel close to my coach/athlete"). Commitment was measured by a four-item scale that assessed the willingness and dedication to maintain the athletic partnership over time (e.g., "I am committed to my coach/athlete"). Complementarity is a four-item scale that measured relationship cooperative actions (e.g., "When I am coached/coaching by my coach/athlete, I am ready to do my best"). Contextualized stems were used to address the appropriate half of the dyad. Both dyad members completed all eleven questions, which were rated on a 1 (*Strongly Disagree*) to 7 (*Agree Strongly*) Likert scale. Previous evidence supports the factorial validity and internal consistency of this instrument (Wekesser et al., 2021).

2.2.4 Data Analysis

Similarity variables for each trait were created and bivariate correlations were conducted (Table 1). To ensure dyadic interdependence (Jackson et al., 2011), similarity between dyads was calculated by the absolute difference of trait scores to create an index of similarity; values closer to 0 represented greater similarity.

We used the Actor-Partner Independence Model to test the hypotheses (APIM; Cook & Kenny 2005). Fonteyn et al., (2022) recommended this approach when studying dyads as the APIM approach considers the interdependencies between both members by modelling the associations between each person's own personality and relationship outcome (e.g., actor effect) as well as on the partner's relationship outcome (e.g., partner effect). This is achieved by linking two individuals through the measurement of one person's score, which provides information about the other person's score. For example, "actor effects" represent within-person associations of individual's DT traits (e.g., athlete narcissism in relation to athlete own levels of closeness), whilst "partner effects" provide a prediction of the person's outcomes which are consequential of their partner's traits (e.g., athlete narcissism in relation to coach's closeness). For appropriate power (0.80),

Ledermann et al. (2020) suggests a minimum of 91 dyads for actor effects (β .15) and 249 dyads for partner effects (β .25) are required. Nine separate models were computed, one for each trait and dimensions of relationship quality, so that independent associations of each trait could be established without any interference of a global score (Figure 3). Structural Equation Modelling was performed, using robust maximum likelihood estimation method. The TYPE = COMPLEX command controlled for the nested structure of the data (i.e., coaches nested within athlete groups; Fransen et al., 2020). This procedure adjusted the standard errors to prevent them from being inflated due to clustering (McNeish et al., 2017). Composite reliability (CR) assessed the internal consistency of each subscale.

The adequacy of the model to the data was evaluated using multiple fit indices: chi-square statistic (χ^2), comparative fit index (CFI; Bentler, 1990), root mean square error of approximation (RMSEA; Steiger, 1990), and standardized root-mean-square residual (SRMR; Hu & Bentler, 1998). Each model was evaluated against Marsh et al., (2004) guidelines, whereby good fit was acknowledged by the following lower lower limits $\chi^2/df \leq 2$, CFI $\geq .95$, SRMR $\leq .06$, RMSEA $\leq .08$. However, standardized cut-off values will always include sensitivity of fit index to model misspecification, small sample bias, estimation method effect, effects of violation of normality and independence, and bias of fit indexes resulting from model complexity. The selection of the "rules of thumb" conventional cut-off criteria for given fit indexes used to evaluate model fit can often be conflicting. Therefore, any fit indices should be looked at as an overall guide and not as an absolute (Hu & Bentler, 1999).

2.3 Results

2.3.1 Descriptive Summary, Statistics and Bivariate Correlations

Descriptive summary statistics, bivariate correlations, and scale reliability estimates are reported in Table 1. For both coaches and athletes, the scores showed that narcissism was, on average, the highest, followed by psychopathy and then Machiavellianism. However, the overall values indicate that both coaches and athletes rated themselves relatively low across all three DT traits. In addition, the mean scores demonstrated relatively high levels of coach-athlete relationships, particularly around the levels of commitment towards each other. For coaches, lower levels of narcissism were associated

with greater levels of complementarity behaviours. Psychopathy was associated with lower relationship quality for coaches across all three sub-scales of relationship quality. Lower levels of coach Machiavellianism were associated with coaches having greater levels of commitment and complimentary behaviours in their relationships. These were all indicated by negative significant correlations. Similar relations were found in athletes. Whilst no significant correlations were found for athletes' narcissism, lower levels of psychopathy and Machiavellianism were associated with greater athlete commitment and complimentary behaviours. Similarity associations indicated that greater dissimilarity on trait narcissism was associated with higher relationship quality, specifically coaches' closeness. There were no relations between similarity for psychopathy and the indicators of relationship quality. For athletes, similarity on Machiavellianism showed a negative relationship with both commitment and complementary.

Table 1

Descriptive Statistics, Composite Reliabilities, and Bivariate Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Coach Narcissism															
2. Coach Psychopathy	.15**														
3. Coach Machiavellianism	.29**	.47**													
4. Coach Commitment	-.08	-.16**	-.12*												
5. Coach Closeness	-.08	-.20**	-.01	.58**											
6. Coach Complementarity	-.14**	-.23**	-.16**	.64**	.67**										
7. Athlete Narcissism	.00	-.14*	-.03	.08	.06	.04									
8. Athlete Psychopathy	.02	.06	.07	-.06	-.07	-.06	.26**								
9. Athlete Machiavellianism	.04	.00	.02	-.06	-.08	-.07	.47**	.36**							
10. Athlete Commitment	-.04	-.02	-.02	.24**	.06	.10	-.06	-.15**	-.22**						
11. Athlete Closeness	-.10	-.08	-.07	.16**	.03	.05	-.03	-.10	-.17	.74**					
12. Athlete Complementarity	-.06	-.07	-.07	.14*	.17*	.12*	-.07	-.23**	-.24**	.63**	.62**				
13. Narcissism Similarity	-.04	-.05	.00	.05	.11*	.08	.24**	.06	.11*	.04	.10	.02			
14. Psychopathy Similarity	.00	.21**	.08	-.09	-.02	-.08	-.00	.30**	.09	-.07	-.04	-.04	.06		
15. Machiavellianism Similarity	.18**	.28**	.59**	-.01	.05	-.01	.07	.18**	.26**	-.12*	-.10	-.17**	.13*	.18**	
M	2.5	1.9	1.8	6.0	6.5	6.4	2.7	1.7	1.6	6.0	6.5	6.2	3.7	3.0	3.3
SD	0.8	0.7	0.8	0.8	0.7	0.7	0.9	0.7	0.7	1.0	0.7	0.8	2.8	2.4	3.1
CR	.74	.73	.89	.73	.92	.82	.84	.75	.85	.81	.90	.86	-	-	-

Note. $N = 316$ dyads. Where appropriate, *$p < .05$. **$p < .01$.; two-tailed.

2.3.2 Structural Equation Modelling

All models demonstrated adequate fit (see A.1 in supplementary material).

2.3.2.1 Narcissism

The only significant actor effect for trait narcissism within the model was for coach complementarity ($\beta = -.21$, $p = .001$). Partner effects across the three subscales were non-significant. Similarity effects showed that narcissism similarity was significantly associated with closeness for coaches ($\beta = .12$, $p = .007$) and athletes ($\beta = .12$, $p = .017$) showing that, within dyads, dissimilarity in levels of narcissism was significantly related to increased levels of perceived relationship closeness.

2.3.2.2 Psychopathy

Actor effects for psychopathy were found for coaches' levels of commitment ($\beta = -.24$, $p = .04$), closeness ($\beta = -.21$, $p = .03$), and complementarity ($\beta = -.38$, $p = .001$). Athlete actor effects on trait psychopathy were also significant for commitment ($\beta = -.15$, $p = .01$) and complementarity ($\beta = -.17$, $p = .007$). All partner effects were non-significant, and the relations between similarity on psychopathy and both coaches' and athletes' relationship quality were also non-significant.

2.3.2.3 Machiavellianism

Actor effects for Machiavellianism were significant for coaches' level of complementarity only ($\beta = -.36$, $p = .02$). There were also significant athlete actor effects for relationship commitment ($\beta = -.23$, $p = < .001$), closeness ($\beta = -.21$, $p = .003$), and complementarity ($\beta = -.24$, $p < .001$). There were no partner effects of coach Machiavellianism on athlete outcomes, however we obtained significant athlete partner effects. Specifically, increases in athlete Machiavellianism were associated with lower levels coach complementarity ($\beta = -.22$, $p = .01$) and closeness ($\beta = -.19$, $p = .01$). No significant relations for similarity emerged for Machiavellianism with either coaches' or athletes' relationship quality.

2.4 Discussion

This study examined the association between the DT on coaches' and athletes' own and partner's relationship quality. We also investigated the role of similarity on the DT. The first hypothesis was partially supported as actor effects were observed for coaches across all DT traits,

whereas for athletes, actor effects were only found in trait psychopathy and Machiavellianism. We found partner effects for Machiavellianism whereby coaches' perceptions of relationship quality were reduced because of higher levels of athlete Machiavellianism. The second hypothesis was also partially supported, as greater levels of dissimilarity on narcissism increased levels of closeness (i.e., affective bonds) for coaches and athletes.

Narcissism was significantly associated with coaches' own perceptions of relationship complementarity behaviour. Coaches consider it their responsibility to set the direction and vision in a dyad (Lara-Bercial & Mallett, 2016). As the DTDD focuses on the grandiose, rather than the vulnerability of this trait (Maples et al., 2014), high-performance coaches may believe that their behaviours would provide the relationship with objective performance success. Coaches who are particularly high in narcissism have shown to be more aggressive towards their athletes (Bryan et al., 2023). While these behaviours might stem from a belief that they (coaches) are critical in achieving success, these behaviours might lead to feelings of being underappreciated, resulting in continuously low levels of relationship complementarity.

For both dyadic members, greater levels of dissimilarity on narcissism resulted in increased positive feelings about their relationship quality. In the general population, individuals high in narcissism have shown to be more tolerant and fonder of their narcissistic peers due to a perceived level of similarity (i.e., narcissistic-tolerance hypothesis; Hart & Adams, 2014), however, this is only applicable to newly formed relationships. With our study being the first to focus on similarity in established relationships, we found that dissimilarity in narcissism enhanced relationship quality through greater positive feelings. This dissimilarity may allow individuals high in narcissism to express their natural inclination to obtain admiration and express self-assured, charming, and entertaining behaviours to reach their performance goal, providing that the other member of the relationship is relatively low in narcissism. However, if a performance objective is not achieved, both individuals might feel the need to defend their own superior status and use selfish, hostile, and aggressive behaviours to do so (Wurst et al., 2017).

Greater levels of psychopathy were associated with lower levels of all elements of coaches' own relationship quality and athletes' own commitment and complementary behaviours. Generally,

we would expect that any reduction in relationship quality would lead to poorer performance (Davis et al., 2018), with psychopathic traits negatively linked to performance success (Hassall et al., 2015) because of the inclination towards self-serving and interpersonally cold, calculating behaviours (Furnham et al., 2013). Interpersonal associations of psychopathy are related to an aggressive and coercive social style (Jonason & Webster, 2012) through enhanced verbal and physical aggression (Jonason et al., 2015). However, surprisingly, no evidence of negative interpersonal associations of psychopathy on relationship quality (i.e., partner effects) were found in this study. High-performance dyads might be emotionally disengaged from each other whilst in pursuit of mutual goals or they may not perceive their dyadic partner to be as important as the mutual goal if they achieve their desired success. For example, in a sporting context, coaches are required to make decisions which may be unpalatable to athletes, such as player selection, for the benefit of performance results. Individuals high in psychopathy also tend to score low in neuroticism (Garcia et al., 2015). Therefore, the negative interpersonal associations with psychopathy might not be relevant to high-performance relationships where individuals choose to utilize the fearlessness, emotional detachment, and calculating nature of this trait to be ruthless in the pursuit of triumph. Interestingly, we did demonstrate that psychopathy was linked to lower levels of dyadic members' own relationship quality, illustrating that this trait might be linked to more intrapersonal associations within high-performance domains.

The current study found that willingness to manipulate, deceive, and exploit others to achieve goals was negatively associated with both coaches' and athletes' own relationship quality. For both coaches and athletes, higher levels of Machiavellianism reduced complementary behaviours within the relationship. This finding may be explained due to hostile Machiavellian attitudes being based on a symbiotic merging between both dyadic members whereby each receive benefits from this trait whilst avoiding harming the other member. In this case it could be that coaches and athletes consider their partner to be an exploitable object, whose existence depends exclusively on the ability to satisfy self-related needs (Paal & Bereczei, 2007). Within a high-performance dyad, coaches are often seen as the individual who evaluates objective performance (Denison, 2007) and are perceived by their athletes to control the power within the relationship (Rylander et al., 2015). Therefore, it may be that athletes are exhibiting more aggressive behaviours

because of higher Machiavellian tendencies (Bryan et al., 2023), to try and equal out this power imbalance.

2.4.1 Practical Implications

Our findings suggest a need to consider who individuals are and highlight the importance of reflecting on how individual characteristics impact performance dyads. For example, individuals high in narcissism can form an effective relationship if assigned to work with someone who is considerably lower to them. Therefore, a consideration of how personalities are likely to interact together seems appropriate. Additionally, all traits seemed to be associated with coaches own intrapersonal relationship outcomes, therefore, additional support should be provided to those who are in a leadership position within a dyad (e.g., a fire fighter and their station commander or an assistant director reporting to the company's director). This support could be delivered by psychologists, line managers or human resource departments, aiding those in leadership positions to consider personalities within dyads to maximize effectiveness and reduce friction.

2.4.2 Strengths and Limitations

It is worth noting the strengths and limitations of this study. High-performance dyads are a difficult group to reach, forming only a small percentage of the general population. This study offers findings based on a substantial sample size. However, we are unable to provide evidence for temporal precedence or causality due to our cross-sectional approach. Thus, the work does not capture the mechanisms through which this relationship functions and how the relationship quality has impacted performance success. In addition, the use of a self-reported measure and the study's cross-sectional design limit its ability to capture the long-term effects of the DT. Furthermore, because coaches self-selected which athletes participated, there is a risk of selection bias, which threatens both the internal and external validity of the findings. Coaches may have, consciously or unconsciously, chosen athletes who were more compliant, higher performing, or those with whom they believed they had stronger relationships with. As a result, this non-random sampling approach may have skewed the sample characteristics and limited the generalizability of the findings to the broader population. Additionally, mean scores across the Dark Triad traits indicate that both coaches and athletes rated themselves relatively low on all three traits. Therefore, the findings may not generalize to populations with moderate or high levels of Dark Triad traits. Without a high/low

comparison, it is also not possible to explore how individuals with elevated levels of these traits may behave within their relationships.

2.4.3 Further Research

Based on our results, we propose several recommendations for future research. The present study represents an important first investigation of the influence of the DT in high-performance dyads. However, the quantitative approach adopted in the present study limits the depth to which we can understand the ways in which these traits influence these relationships. As such, studies may wish to utilize a qualitative methodology, as this would generate a richer understanding of how high-performance relationships function. Research might want to consider methods such as informant or behavioural ratings of the DT and/or relationship quality so that findings are not exclusively reliant on self-reported approaches. Further research should also identify how the DT impacts relationship quality over the course of a financial year or athletic season, to understand how these relations may change over time. Additionally, extending the links between the DT, dyadic relationship quality and performance outcomes would be worthwhile. Finally, exploring the generalizability of our findings across other high-performance domains (e.g., the business sector) is warranted.

2.5 Conclusion

This study provides the first examination of the relationship between the DT and relationship quality in high-performance dyads. Greater dissimilarity in narcissism was associated with better relationship quality for both dyadic members. Actor effects indicated that higher levels of narcissism, psychopathy, and Machiavellianism were related to a reduction in coaches' own relationship quality, whilst only higher levels of Machiavellianism were associated with a reduction in athletes' own levels of relationship quality. Partner effects showed that higher levels of athlete Machiavellianism were associated with the relationship quality of coaches. These findings indicate the importance of understanding high-performance dyadic personalities in determining each other's relationship outcomes.

CHAPTER 3: "YOU'RE JUST LIKE ME, SO WE MUST BE GREAT TOGETHER": HOW SIMILARITY IN NARCISSISM IMPACTS THE QUALITY OF THE COACH-ATHLETE RELATIONSHIP[2]

Abstract

Narcissism has emerged as a highly relevant personality trait in sporting contexts, as its competitive environment offers individuals numerous opportunities to pursue personal glory. However, little is known about narcissism in the context of the coach-athlete relationship, and the extent to which similarity in narcissism across coaches and athletes can influence relationship quality. This study sought to explore how similarity in narcissism affects a coach's perception of their coach-athlete relationship. Data from semi-structured interviews with 30 national and international coaches were analysed using thematic analysis within a critical realist approach. Coaches were purposefully sampled based on their Coach-Athlete Relationship Questionnaire & Dark Triad Dirty Dozen narcissism scores from Chapter 2. Four groups were then established: similar in trait narcissism/higher relationship quality (Sim-Higher), similar in trait narcissism/lower relationship quality (Sim-Lower), dissimilar in trait narcissism/higher relationship quality (Dis-Higher) and dissimilar in trait narcissism/lower relationship quality (Dis-Lower), prior to any interviews. Using Wiltshire & Ronkainen's (2021) three level framework of analysis, seventy experiential, eighteen inferential, and five dispositional themes were generated. The dispositional themes were perceived relationship perfection, high (perceived) self-awareness, breeding behaviors, relationship power and relationship elasticity. This study offers an insight into the experiences of similarity in narcissism and the subsequent influence on the quality of the coach-athlete relationship.

Keywords: Coaches, Critical Realism, Dyadic Relationships, Narcissist, Personality Traits.

3.1 Introduction

The coach-athlete relationship is one of the most valued dyadic relationships in sport because both members depend on each other to achieve a collective goal (Jowett, 2017). For instance, a coach will observe their athletes in a way they cannot possibly observe themselves, while athletes experience sport in a way the coach cannot fully experience. This unique dyadic relationship has been defined as a dynamic social situation in which coaches' and athletes' cognitions, feelings, and behaviours are mutually and causally interdependent (Jowett & Shanmugam, 2016). The coach-athlete relationship has been contextualized in terms of an individual's level of closeness (e.g., respect, trust, appreciation), commitment (e.g., wanting to maintain a close relationship over time), complementary behaviours (e.g., approachability and responsiveness), and an ability to work together with a co-orientated approach (e.g., sharing of knowledge and understanding). This theoretical framework, known as the 3 + 1Cs model (Jowett, 2007), has been used extensively to demonstrate how an effective coach-athlete relationship can result in enhanced well-being (Davis et al., 2022), and improved performance (Phillips et al., 2023). Examining the coach-athlete relationship through the 3 + 1Cs model offers valuable insights into how the dynamic, reciprocal interactions between coaches and athletes are shaped by key antecedent variables (Jowett & Poczwardowski, 2007). This can include the personalities of both coaches and athletes, as well as the degree of similarity or dissimilarity of their personalities (Baudin et al., 2011; Jackson et al., 2011).

The concept of personality similarity has long intrigued relationship researchers, both from empirical (e.g., Byrne, 1971) and anecdotal perspectives (e.g., *Do opposites attract?* [Sample, 2023]). In romantic relationships, personality similarity has been linked to various relationship benefits such as decreased disagreements (Rammstedt et al., 2013) and relationship longevity (Arranz-Becker, 2013). In sporting research, Stanford et al. (2022) demonstrated that within successful elite coach-athlete relationships, both members identified areas of how personality similarity helped them to align their thoughts and feelings to each other. This process enabled them to increase their understanding of each other and better predict their partner's behaviours. In addition, dissimilarity was also perceived as a positive component of their elite coach-athlete relationship, allowing both coaches and athletes to experience a sense of balance, be able to read

each other more accurately, and facilitate better communication. Yet, within a coach-athlete relationship, dissimilarity in personality traits can result in feelings of disconnectedness, and a lack of belonging and care for each other (Jackson et al, 2011). Overall, the possible positive and negative effects of personality similarity on the coach-athlete relationship remains unclear. Furthermore, research in this area has generally focussed on broad personality constructs such as the Big Five (i.e., Jackson et al, 2011). In recent years there have been calls to move beyond the broad personality approaches (i.e., Big Five) and to investigate other personality traits that might be highly relevant to sporting contexts (Roberts et al., 2018).

One such personality trait that has emerged as highly pertinent in sport is narcissism[3], as sporting environments can provide individuals with exponential glory (e.g., winning, recognition, fame). Within subclinical settings narcissists are characterised as being "self-centred, self-aggrandizing, entitled, dominant", with "a manipulative interpersonal orientation" (Morf et al., 2011 p. 400). Narcissists can be charismatic, charming, and supremely confident individuals with a strong drive for success. However, their sense of personal superiority or overconfidence often serve as a self-protective factor to mask deep-seated feelings of vulnerability and inadequacy (see Roberts et al., 2018 for a review of narcissism in sport). Narcissists believe they are exceptional performers, yet their heightened perception of ability does not always translate into actual results (Roberts et al., 2018). In coaching roles such individuals more frequently demonstrate a controlling interpersonal style (e.g., trying to motivate through coercion or intimidation, exerting excessive control over athletes), which can impact their relationship and performance outcomes (Matosic et al., 2020). For example, coaches who are higher in narcissism tend to win fewer gold medals at the Olympics (Cook et al., 2021). A successful coach-athlete relationship requires both members to contribute equally to its effectiveness by adopting a coach-athlete centred approach (Jowett & Slade, 2021). However, narcissists in dyadic relationships have been shown to be insensitive, selfish, hostile, or aggressive (Wurst et al., 2017). As such, narcissism could be potentially limiting a coach's ability to create an effective relationship with their athletes by overemphasising their own

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[3] The term 'narcissists' or reference to 'narcissism' in this article refers to individuals who score relatively high on non-clinical, valid self-report measures.

ability, putting their own needs ahead of their athletes, or playing down the contributions of their athletes in their success.

To the best of our knowledge, Chapter 2 is the only study to date has explored the effects of similarity in narcissism in the context of coach-athlete relationships. Taking a quantitative approach, Chapter 2 found that greater dissimilarity in narcissism (i.e., greater differences in narcissism scores between coaches and athletes) resulted in higher relationship quality for coaches, and higher levels of narcissism in coaches negatively affected their behaviours (i.e., complementarity) toward their athletes. Interestingly, the athletes' level of narcissism had no effect on either their own relationship quality or that of their coach. These findings suggest a greater need to focus on how narcissism is primarily influencing relationship quality for coaches. Additionally, little is known about how coaches feel about the role of narcissism in their relationship or how this results in them behaving towards the athletes they are working with. Furthermore, the quantitative approach employed in Chapter 2 offers limited insight into the thoughts and feelings underlying coaches' negative complementary behaviours, as well as how similarities in narcissism shape their perceptions of the quality of their relationships with athletes.

To address the current limitations in the field, alternative methodologies should be adopted. By combining qualitative methods with existing quantitative findings, a more comprehensive understanding of coaches' experiences within their coach-athlete relationships can be achieved. In sport psychology, there has been growing advocacy for more rigorous qualitative practices, particularly those that consider ontological and epistemological perspectives (Poucher et al., 2020). Critical realism represents a significant advancement in social science methodology, as it develops a qualitative theory of causality and allows for the identification of underlying patterns in social phenomena through the triangulation of multiple data sources (e.g., narcissism similarity scores and semi-structured interviews). Critical realism highlights how both quantitative and qualitative data co-exist within the "real" world, each contributing valuable insights to our understanding of social phenomena (Gorski, 2013).

3.1.1 The Present Study

Addressing the limitations of the literature on personality in the coach-athlete relationship, the present study had two aims. First, we examined the extent to which coaches' own levels of narcissism influenced their perception of their relationship quality. Second, we explored how similarity in trait narcissism influences coaches' perceptions of their relationship, using the 3 + 1Cs model (i.e., closeness, commitment, and complementarity). Specifically, we assessed both aims using the critical realist approach to thematic analysis proposed by Wiltshire and Ronkainen (2021). This process assessed the corresponding validity indicators of empirical adequacy, ontological plausibility, and explanatory power.

3.2 Method

3.2.1 Transparency and Openness

This study was not preregistered and adheres to the American Psychological Association's Journal Article Reporting Standards for Qualitative Research (JARS-Q; Levitt et al., 2018). To protect participant confidentiality, audio recordings of the interviews and their transcripts are not publicly accessible. The interview guide has been provided within supplementary data (A.2).

3.2.2 Participants

Thirty coaches (18 male, 12 females, M_{age} = 37.7 ± 6.5 years) were recruited having initially participated in Chapter 2. Coach participants were re-contacted via email and asked to participate in this study based on the similarity between their own and their athletes' levels of narcissism (see below for more details on this process) and the quality of their coach-athlete relationship as previously reported. These coaches worked in three individual sports (Swimming = 18; Triathlon = 7; Cycling = 5) at an international (n = 9) or national level (n = 21). Coaches had been working with their identified athlete for 2 to 8 years (M = 3.9 ± 1.9 years) and worked with them for 9 to 40 hours of contact per week (M = 6.3 ± 5 hours). Table 2 provides further information on the narcissism levels of each coach and athlete, their similarity, sampling percentiles, and specific demographic factors (e.g., sport, gender, etc).

Table 2

Sampling Groups, Participants Demographics, Raw Data Scores and Data Percentiles

	Sport	Gender	Coaching Level	Coach Narcissism Score	Athlete Narcissism Score	Absolute Difference (ABS)	Coach Relationship Quality Score	ABS Percentile	Relationship Quality Percentile
Dissimilar Narcissism Score and Higher Relationship Quality (Dis-Higher)									
Coach 1	Swimming	Male	International	4	18	14	75	99th	74th
Coach 2	Swimming	Male	National	16	5	11	76	98th	83rd
Coach 3	Swimming	Male	National	8	17	9	77	93rd	90th
Coach 4	Triathlon	Female	National	8	19	11	75	98th	74th
Coach 5	Cycling	Female	International	11	19	8	77	87th	90th
Coach 6	Triathlon	Female	National	4	20	16	75	100th	74th
Coach 7	Swimming	Male	National	14	4	10	76	97th	83rd
Dissimilar Narcissism Score and Lower Relationship Quality (Dis-Lower)									
Coach 8	Swimming	Male	National	16	6	10	52	97th	1st
Coach 9	Swimming	Male	International	9	17	8	56	87th	4th
Coach 10	Swimming	Male	International	8	16	8	64	87th	16th
Coach 11	Swimming	Female	National	16	8	8	52	87th	1st
Coach 12	Triathlon	Female	National	13	5	8	59	87th	9th
Coach 13	Triathlon	Female	National	10	4	6	54	78th	3rd
Coach 14	Cycling	Female	National	12	4	8	55	87th	4th
Coach 15	Swimming	Male	International	17	7	10	63	97th	15th

Similar Narcissism Score and Higher Relationship Quality (Sim-Higher)

Coach 16	Swimming	Male	National	14	13	1	77	7th	90th
Coach 17	Swimming	Male	National	14	13	1	77	7th	90th
Coach 18	Triathlon	Female	National	10	11	1	77	7th	90th
Coach 19	Swimming	Female	International	9	10	1	75	7th	74th
Coach 20	Swimming	Male	International	9	10	1	75	7th	74th
Coach 21	Triathlon	Female	National	9	10	1	76	7th	83rd
Coach 22	Cycling	Male	National	10	10	0	75	1st	74th
Coach 23	Swimming	Male	National	8	8	0	75	1st	74th

Similar Narcissism Score and Lower Relationship Quality (Sim-Lower)

Coach 24	Swimming	Female	National	13	12	1	44	7th	1st
Coach 25	Swimming	Male	National	6	5	1	56	7th	4th
Coach 26	Triathlon	Female	National	9	10	1	57	7th	5th
Coach 27	Triathlon	Male	National	12	11	1	58	7th	8th
Coach 28	Swimming	Male	International	10	9	1	60	7th	11th
Coach 29	Cycling	Male	National	11	12	1	64	7th	16th
Coach 30	Cycling	Male	International	8	9	1	61	7th	13th

3.2.3 Research Design and Methodology

Our research was underpinned by the paradigm of critical realism. The search for causal mechanisms within a critical realist approach helps researchers explain social contexts and events to address a social phenomenon (Ronkainen & Wiltshire, 2019). This is achieved through ontological realism, epistemological relativism, and judgmental rationality. Ontological realism accepts there is a singular reality, that exists independently of the research team and participants (Wiltshire, 2018), despite social contexts being highly complex and multi-layered. Epistemological relativism recognises knowledge is an artificial product, produced in a specific context (Wong et al., 2013), allowing for the acceptance of the idea that there are different views on reality. This knowledge is transitive, finite, and fallible to that specific phenomenon, which is critiqued and scrutinised via judgmental rationality. Therefore, critical realism allows for a plausible and accurate account of how similarity in narcissism impacts the coach-athlete relationship.

3.2.4 Data Collection

Following institutional ethical approval, coaches were identified by purposefully sampling the lowest and highest percentiles from trait narcissism scores, which were in relation to similarity with their athletes, on the Dark Triad Dirty Dozen (DTDD: Jonason & Webster, 2010), and relationship quality based on responses to the Coach-Athlete Relationship Questionnaire (CART-Q: Jowett & Ntoumanis, 2004) from an earlier study, as detailed in Chapter 2. Specifically, individuals were identified who were on the lower or upper percentiles (Table 2) of similarity with their athlete on trait narcissism and relationship quality. Once identified they were affiliated to one of the four sampling groups: similar in trait narcissism/higher relationship quality (Sim-Higher), similar in trait narcissism/lower relationship quality (Sim-Lower), dissimilar in trait narcissism/higher relationship quality (Dis-Higher) and dissimilar in trait narcissism/lower relationship quality (Dis-Lower). Similarity between dyads was calculated by the absolute difference of trait scores to create an index of similarity, ensuring dyadic interdependence (Jackson et al., 2011). Values closer to 0 represented greater similarity between dyads. The lead researcher contacted the participants who scored the highest and/or lowest on the DTDD and CART-Q then worked down the percentiles until data saturation was achieved.

Once identified, coaches participated in a single, semi-structured interview. An interview guide consisting of three sections was developed for each sampling group (full interview guides in S1). All four interview guides were identical regarding the framing of questions, with amendments only made to refer to the participants assigned sampling groups (e.g., how is your relationship quality influenced so positively/negatively because you and [athletes name] have a similar/dissimilar level of ...). We piloted each interview guide with an international-level coach who was independent of the study and refined it prior to data collection. To counter the often-negative connotations associated with narcissism, at the start of each interview the lead researcher read out a statement to all participants. This highlighted the neutral position of the research team toward the effects of narcissism, in line with interactionist perspectives on the impact of personality (e.g., Roberts et al., 2018), and the interest/focus was on the coach's experience of working with an athlete who was similar or dissimilar to them in this trait. Further, the term narcissism was replaced with its definition of "self-centred, self-aggrandizing, entitled, dominant, and a manipulative interpersonal orientation" (Morf et al., 2011 p.400) to remove any predetermined ideas the participants might have associated with this trait. The interviews ranged in duration from 41 minutes to 77 minutes (Mduration = 56.0 ± 9.5 min).

3.2.5 Data Analysis

To ensure methodological coherence (Poucher et al., 2020), the lead researcher transcribed all interviews verbatim. In conjunction with notes taken during the interviews, the data was analysed using a critical realist approach to thematic analysis (full data analysis is available in iREP). Wiltshire and Ronkainen (2021) proposed that a realist approach in conjunction with thematic analysis should be structured around the three domains of experiential, inferential, and dispositional themes outlined in Bhaskar's (1975) conception of a stratified ontology. Experiential themes refer to subjective viewpoints, such as intentions, hopes, concerns, beliefs, and feelings that are observed experiences by the participants as captured in the data. The generation of the experiential themes within each sampling group started with the lead researcher reading the transcripts and listening again to the recordings of all the interviews to re-familiarise himself with the data. To ensure we achieved complete re-immersion, we conducted a second reading of each sampling group alongside annotations on the transcripts (Smith & Sparkes, 2009). Any data-driven

identified quotes were listed to generate "nascent" experiential themes in Microsoft Excel. Nascent experiential themes were listed vertically, each theme as a new row, and were written in plain-English with descriptions of the observed experience expressed by the participant. We repeated this process for the second transcript with the addition of a "deductive" checking process of whether the same observed experience was also true for the second participant. Any new data-driven themes were added as a new row. The deductive checking of each transcript against the others was repeated, resulting in a master list of experiential themes for each sampling group. Each sampling group's master list was shared with the wider research team, where detailed conversations followed to ensure each participant's quote, descriptive labels, and the strength of each theme across the sampling group was discussed ensuring the coaches' viewpoints were accurately represented. After each conversation, the lead researcher returned to the raw data to check and/or amend descriptive labels to improve representations of a particular participant's quote.

The next stage was to move beyond experiential themes (i.e., evidence-based statements about participants in the data) towards the generation of inferential themes. Inferential themes refer to the notion that some aspects of the social world are not empirically observed but can be inferred through our experiences and empirical investigations. Inferential themes meant the analysis moved beyond a "data-driven" and "deductive" thinking processes and combined "inductive" and "abductive" thinking as an extension of the experiential themes. The lead researcher independently generated inferential themes and added them to a separate tab on the Microsoft Excel document. This was again shared with the research team for judgmental rationality to be applied. Developing these inferences relied on the research team's combined knowledge of the conceptual landscape of the participants, applied experience within coaching environments, and current associated literature to generate key and new concepts that are ontologically plausible. In instances of dispute, the lead researcher would refer to the transcripts to check the original statements made by the participants.

The final stage was to theorize and examine the potential power that exists in coaches' relationship quality on similarity in narcissism and how this has manifested in their current relationship through dispositional themes. Generating dispositional themes relied on building on the current generated experiential and inferential themes to determine the "latent" or "dormant" mechanisms within coaches that cause real influence in their relationship (Jagosh, 2020). Again,

the lead researcher worked independently on nascent dispositional themes in Microsoft Excel before bringing his ideas to the wider research team so that further judgmental rationality could be collectively applied. Before any dispositional theme was accepted, it needed to be aligned to the experiential and inferential themes. In alignment with the established experiential and inferential themes, all proposed dispositional themes were scrutinised in accordance with the following statement "because this [dispositional theme] exist, there is a likelihood that this [inferential themes] happens in the coach-athlete relationship, which is demonstrated in our data through the coaches reporting [experiential themes]" amended from Wiltshire and Ronkainen (2021). It was then either accepted or rejected. This alignment checking process allowed dispositional themes to be generated in a logical and coherent way that summarised the analysis, resulting in methodological cohesion between critical realist philosophy and thematic analysis that ensured an emphasis on both accurately capturing the empirical world (through experiential themes) as well as creative thinking and engaging with theory and concept (through inferential and dispositional themes).

3.2.6 Methodological Rigor

Critical realism, like all philosophical positions, cannot produce any guarantee of absolute conclusions (Maxwell, 2012). However, rigor was assessed against Maxwell's (1992) corresponding validity indicators of empirical adequacy, ontological plausibility, and explanatory power to ensure the highest level of credible conclusions have been attained (Wiltshire & Ronkainen, 2021). Rigor was applied through empirical adequacy when the experiential themes were generated. This meant the reported themes needed to accurately represent the intentions, hopes, concerns, feelings, and beliefs that the participants observed in their relationships. Therefore, all transcripts were re-read, and interview recordings were repeatedly listened to ensure the lead researcher absorbed all the raw data. The development of "nascent" experiential themes, with a deductive checking across all participants within the sampling group and crosschecking the lead researcher's accuracy of participants quotes and descriptive labels with the remaining research team, enabled critical realist ontological assumptions to be met. The aim was not to try and achieve consensus but to ensure empirical adequacy was being achieved by checking if the lead researcher had accurately interpreted the coaches' experiences about their relationship. All inferential themes

had to achieve ontological plausibility to be accepted in the analysis and ensure enhanced rigor was ascertained.

Ontological plausibility refers to the notion that the generated inference themes had to be considered as plausible reflections of what occurs to a coach's relationship quality because of their level of similarity with their athlete. This was made possible through the credibility of the research team and application of judgmental rationality when reviewing and refining each proposed interpretive theme. Therefore, any unobserved but occurring experiences by the coaches that effected their relationship quality were identified, discussed, and evaluated. To be accepted, any epistemological statements made by the research team had to reflect the ontological position of critical realism. An examination of the explanatory power in the dispositional themes (i.e., unobservable causal power and potential mechanisms in the real world) ensured the highest possible rigor was attained. Again, this was achieved through the application of judgmental rationality during frequent meetings in which the team discussed and evaluated the nascent themes initially proposed by the lead researcher. When these themes were checked, the research team members held the lead researcher to account in terms of what the analysis had so far revealed before any mechanisms were confirmed. This "critical friend" approach (Smith & McGannon, 2018) ensured that any claims produced in this study were safeguarded (Maxwell, 2017).

3.3 Results

Our analysis produced five dispositional themes: perceived relationship perfection, high (perceived) self-awareness, breeding behaviours, relationship power, relationship elasticity. These themes influenced the levels of closeness, commitment and complementarity within the relationships. The five dispositional themes were underpinned by 18 inferential themes and 70 experiential themes (Table 3). Direct quotations from the transcripts have been included to illustrate the way coaches' perceptions of their relationship quality are formed.

Table 3

Dispositional, Inferential and Empirical Themes

Dispositional Themes	Inferential Themes	Empirical Themes
Perceived Relationship Perfection	Superior Relationship	Supreme relationship (Sim-Higher)
		Relationship rigidity (Sim-Higher)
		Care more than other coaches (Sim-Lower)
		I am amazing in relationships (Sim-Lower)
		Athletes reinforce my greatness (Dis-Higher)
		I am a great leader (Dis-Higher)
		Adding value to the athlete (Dis-Higher)
		Boost the athlete ego (Dis-Higher)
		Athlete is a leader of others (Dis-Lower)
	Influenced Performance	Improve dyadic performance (Sim-Higher)
		Poor performance resulted in relationship deterioration (Sim-Lower)
		Unfulfilled performance potential (Sim-Lower)
		Athlete success meant better relationship (Dis-Higher)
High (Perceived) Self-Awareness	Fitting My Coaching Style	Pushing performance standards (Sim-Higher)
		Performance over personality (Dis-Lower)
	Understanding	Vulnerability (Sim-Lower)
		People are different (Dis-Higher)
		I understand them (Dis-Lower)
		I can read them (Dis-Lower)
		Felt they had a very strong relationship (Dis-Lower)
		Not understanding different personality (Dis-Lower)
		I can read them well (Dis-Lower)
	Poor Connection	Can't read their emotions (Dis-Lower)
		Difficulty connecting (Dis-Lower)
		Test emotional tolerance (Dis-Lower)
Breeding Behaviours	Liberated	Being themselves (Sim-Higher)
		Relationship comfortability (Sim-Higher)
		Flexibility to allow them to be themselves (Dis-Higher)
	Necessary For Success	Positive impression (Sim-Higher)
		Part of being successful (Sim-Lower)
		Accepting of higher performing athletes' behaviour (Dis-Higher)
		Enjoyed that athlete's spite (Dis-Higher)
	Developing Their Characteristics	Manor of operating (Sim-Higher)
		Nurture the relationship (Dis-Higher)
		Easier to tone this personality down (Dis-Lower)
Relationship Power	Control	Situational control (Sim-Higher)
		Interpersonal control over the athlete (Dis-Higher)
		Needed to be around the athlete (Dis-Lower)
	Manipulating The Relationship	Indirect communication (Sim-Higher)
		Manipulation is my job (Sim-Higher)
		Trust through concealment (Sim-Higher)
		Could not manipulate their athletes (Sim-Lower)
		Don't manipulate me (Sim-Lower)
	Dominance	Power struggle leading to a dead lock (Sim-Lower)
		Emotional investment (Sim-Lower)
		Careful with my dominance (Dis-Higher)
		Enjoys athletes' dominance (Dis-Higher)
		They just do as they are told (Dis-Lower)
		I am dominance (Dis-Lower)
	Control The Levels of Closeness	Low empathy (Sim-Lower)
		Overly close relationship (Sim-Lower)
		Get out their way (Dis-Higher)
		Space with the relationship (Dis-Lower)
	Listening	Athlete listened to the coach (Dis-Higher)
		Difficulty in listening to the athlete (Dis-Lower)
	Communication	Honest communication (Sim-Higher)
		Poor two-way communication (Sim-Lower)
		Harsh critique (Sim-Lower)
Relationship Elasticity	Demanding Relationship	I push them towards greatness (Sim-Higher)
		Equal intensity (Sim-High)
		Sport is hard and should be the relationships (Sim-Lower)
		Demanding of each other (Sim-Lower)
		Higher standards (Dis-Higher)
		Increased effort to communicate (Dis-Lower)
	Natural Conflict	Conflict is an inevitability (Dis-Lower)
		Small consistent disagreements (Dis-Lower)
	Investment Of Time	Invested a lot of time (Dis-Higher)
		Resented the amount of time invested (Dis-Lower)
	Clear Expectations & Boundaries	Clear boundaries (Sim-Higher)
		Clear goal and roles in the relationship (Dis-Higher)

3.3.1 Perceived Relationship Perfection

This dispositional theme refers to coaches feeling their relationship was faultless and they would not tolerate any flaws in their athlete's character. This theme was prevalent across all sampling groups, despite the level of similarity and coaches' own self-reported level of relationship quality. Two inferential themes were identified in this dispositional theme: superior relationship and influenced performance.

3.3.1.1 Superior Relationship

This inferential theme included nine experiential themes across all sampling groups. Specifically, we determined that coaches are likely to think they are committed to their athletes as they create an outstanding relationship with them. In the Sim-Lower sample despite self-reporting lower relationship quality, some of the coaches felt that similarity on narcissism allowed them to be better than other coaches because they cared more about their athlete enhancing the level of closeness. Coach 24, who along with their athlete had one of the highest absolute scores for narcissism in their sampling group, felt similarity led to a better relationship:

> I understand her you know; I know where we are with each other if that makes
> sense. I observe other coaches who work with her in the squad, I know that they feel
> they can't get the best out of her. But with me, our relationship allows us to be
> incredible. [Coach 24, Sim-Lower]

3.3.1.2 Influenced Performance

This inferential theme included four experiential themes across all sampling groups apart from Dis-Lower. Coaches are likely to think that their dyadic performance is affected because of their level of similarity. Within the Sim-Higher sampling group, most of the coaches felt being similar in trait narcissism allowed for their mentality to be aligned with that of their athlete in turn producing higher relationship quality:

> Sometimes you coach swimmers who you want to coach a certain way, but you
> can't. Because their mentality isn't aligned with yours, their mindset isn't right. And
> you end up compromising really...With [Athlete's Name] because she was like me, I

could coach her the way I wanted to coach her. The way I believed a World Junior breaststroke champion should be coached. [Coach 17, Sim-Higher]

3.3.2 High (Perceived) Self-Awareness

Coaches perceived their level of awareness to be different depending on their level of similarity. This level of perceived awareness influenced the quality of their relationship. Three inferential themes were identified in this dispositional theme: fitting my coaching style, understanding, and poor connection.

3.3.2.1 Fitting My Coaching Style

This inferential theme was developed from two experiential themes from the Sim-Higher and Dis-Lower sampling groups. Coaches felt that similarity allowed them to coach in their own way, which resulted in higher complementary behaviours in their relationship. Most participants in the Sim-Higher sample strongly believed that similarity drove performance and positive relationships. Coach 23, who independently scored exactly the same on narcissism as their athlete, explained:

> If we weren't the same personality trait, like [Different athlete's name] was the opposite, she was a melt, and I couldn't relate to her...Whereas with [Athlete's Name], I'd push him into situations, I'd push him into a challenge; I'd push him over the cliff and make him fly. With [Athlete's Name] I was like, you're going to be just fine, f**k it, let's go. [Coach 23, Sim-Higher]

In contrast, many coaches within the Dis-Lower category felt dissimilarity led to poor relationship quality because athletes were only picked on their performance level. Coach 8, who was higher than his athlete in narcissism with one of the biggest absolute differences, explains:

> We're working within a swim team; we don't have four athletes that we can handpick through personality profiling, as well as performance profiling. So, we get what we're given in effect... so the relationship is always secondary if we want to win. [Coach 8, Dis-Lower]

3.3.2.2 Understanding

The second inferential theme included five experiential themes across all sampling groups. Coaches are likely to feel that understanding their athlete's level of narcissism in comparison to their own allowed them to achieve greater relationship quality through higher levels of closeness. Within the Sim-Higher sample, most of the coaches believed that similarity gave them a better understanding of their athlete:

> If we've got similar traits, then our thought processes will be the same and we will react similar in situations… So, if I'm down she's going to be, but equally, if she's riding high, I'll probably be able to tap into that and know what's going to affect her, and how that will then affect her performance and her mood. Because I suppose if I know what's affecting my mood, then I'll know it's affecting hers. [Coach 19, Sim-Higher].

It is of interest to this study that coaches within the Dis-Higher group could identify that their athlete had a different level of narcissism to their own and this acknowledgement supported higher relationship quality:

> We are all different types of people, I understand that. She can be self-centred and dominant but that is not a bad thing. I feel like I talk to her much more like a human …, and obviously treat her with respect, I know she is different to me, and I think that's why I've been successful with her. [Coach 3, Dis-Higher]

3.3.2.3 Poor Connection

The final inferential theme included three experiential themes from only the Dis-Lower sampling group. Due to a lack of similarity on narcissism coaches in this group often struggled to relate to their athletes resulting in lower levels of relationship closeness. They found it hard to personally connect with their athletes and could not read them. Coach 10, who was lower than his athlete in narcissism, stated: "I think being similar is better because you have a better understanding of why they are so emotional at times and react the way they do to things." For most of the coaches this lack of similarity resulted in them struggling to bond with their athletes, thus

reducing their relationship quality. Coach 15 who was higher than their athlete on narcissism, explains:

> He's spent some time in the last [COVID-19 related] lockdown, looking around at what some of the best athletes are doing in the world that are male in the gym and he can f**king rinse them. So, he looks at it and goes, well I can lift that, and I can do twice as many reps, and it's not a problem. I'm already as good if not better than most of them in the gym, but we're having to rein that in. That's part and parcel of him understanding, and me understanding how to connect with him better to get that message across in a way that keeps relating to him, but it is often hard. [Coach 15, Dis-Lower]

3.3.3 Breeding Behaviours

Coaches felt that trait narcissism was an advantage in competitive sport, and felt it enhanced their relationship. Three inferential themes were identified in this dispositional theme: liberated, necessary for success, and developing their characteristics.

3.3.3.1 Liberated

This first inferential theme was developed from three experiential themes from the Sim-Higher and Dis-Higher sampling groups. Similarity on trait narcissism would often allow coaches to feel they could be themselves, which meant they encouraged their athletes to do the same resulting in greater levels of relationship complementarity:

> I think being similar allows me just to be myself rather than feel like I've got to put on a different personality. It allows her to be herself as well… I think it enhances our relationship because we can just be normal, we don't have to put on an act. It is no effort to have conversations about how great we are going to be this season. [Coach 22, Sim-Higher]

However, within the Dis-Higher sample, to achieve higher relationship quality, coaches strongly felt that because of their dissimilarity, they had to be more flexible and allow the athletes to be themselves:

I give her space to express herself… I want to give her an environment that has

mutual respect, so she can be herself and use colourful language... It is allowing them

that freedom and sort of slightly wider constraints to allow for flexibility. [Coach 7,

Dis-Higher]

3.3.3.2 Necessary For Success

This second inferential theme consists of four experiential themes across all sampling

groups. Coaches are likely to strongly think that narcissism gave their athletes a spiteful edge in the

pursuit of winning allowing them to have greater levels of closeness within their relationship.

Coach 2, discusses the positive effect that this had on their relationship:

He'd be able to hit his targets, and then if someone, perhaps a younger athlete doing

freestyle was at a similar level to him doing fly, he'd automatically go and race them

and make sure that he beat them…He'd manipulate where he would be in the lane to

make sure that he had a competitor in training. It's a good feeling. It made me proud

because I want him to win and be the best. [Coach 2, Dis-Higher]

Coaches in the Dis-Higher sampling group were very accepting of narcissistic tendencies as

they strongly believed top athletes were narcissistic and they wanted to work with the best. Coach 1

who was lower than his athlete in this trait explained, "I want to work with top athletes. Most

athletes at the highest level must be self-centred and focused on themselves, otherwise they would

always train to be average, not push themselves, So, I am okay with them being self-centred."

3.3.3.3 Developing Their Characteristics

The final inferential theme was developed from three experiential themes from all sampling

groups apart from Sim-Lower. Some coaches within the Sim-Higher group strongly believed that

similarity created a relationship which taught their athlete how to conduct themselves in the

sporting environment. This allowed for higher levels of complimentary behaviours within their

relationship:

So, my job, I took it upon myself to try and teach him the difference between

confidence and arrogance, and respecting the people around you, your environment,

being humble. Because deep down, that is how he is, that is the person he is, but

that's not who he was portraying. [Coach 16, Sim-Higher]

Achieving higher relationship quality when coaches were dissimilar in narcissism was accomplished through nurturing complementary behaviours within their relationship over time. Coach 2 in the Dis-Higher sample was considerably higher than their athlete in this trait but describes how nurturing the relationship resulted in a positive outcome:

She was driven from start to finish, and she was always engaged with what I had to

say because the drive was there. Developing our relationship was through nurturing

it over time… I'd say she started as a very average regional level swimmer; the

nurturing opened her eyes to what she could achieve, because she wasn't aware of

her capabilities. Once her eyes opened then she went from an average regional

swimmer to a national medallist. [Coach 2, Dis-Higher]

3.3.4 Relationship Power

This dispositional theme refers to the notion that coaches felt that they possessed the power within their relationship. The six inferential themes identified in this dispositional theme were: control, manipulating the relationship, dominance, controlling the level of closeness, listening, and communication.

3.3.4.1 Control

The first inferential theme consists of three experiential themes across the sampling groups apart from Sim-Lower: coaches often need to feel like they are in control of their coach-athlete relationship. For example, in the Dis-Higher group most participants felt strongly that the coach should always be in control of the athlete's behaviour. Coach 1, who was considerably lower than his athlete in narcissism and had the second overall highest absolute difference, demonstrated how he used verbal control over his athlete:

Yeah, because I think it there's trust there initially, then swimmers will allow you to

control them. And I think again, it goes back to where they're swimming well as

well. I think it swimmers are swimming well, and they're seeing results, they allow

you to control them, the environment, and the relationship. [Coach 1, Dis-Higher]

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3.3.4.2 Manipulating The Relationship

The second inferential theme consists of five experiential themes across the sampling groups of Sim-Higher and Sim-Lower. In the Sim-Higher sample, coaches are likely to feel that it is an advantage to manipulate their athletes. Specifically, some coaches believed that manipulation was part and parcel of being a good coach and being similar allowed them to manipulate their relationship more effectively, resulting in a positive perception through greater levels of complementary behavior within their relationship. Coach 17 was very open about this saying, "I think I would say I'm trying to manipulate my athlete all the time". This manipulation comes in many forms. For example, Coach 16, who along with their athlete had one of the highest levels of narcissism within this sampling group, illustrates how they used indirect communication to ensure higher relationship quality is maintained:

> If I was going to give [Athlete's Name] some feedback and some criticism that he maybe didn't want to talk about or didn't want to accept, or maybe wouldn't have accepted positively, and there was somebody else in the lane that also could do with the same criticism, I would coach the other person while [Athlete's Name] was stood next to them. And I knew full well that [Different Athlete's Name] would know that he doesn't do that…rather than me highlight it to him, and have that awkward negative conversation, I'd just tell the kid who's going to go, okay thanks. Then [Athlete's Name] would push off the wall and change himself. Because I've not told him that he's wrong, I've not highlighted the problem. He's heard me criticise somebody else, so he. almost thinks, he almost believes that I haven't seen him do something wrong. [Coach 16, Sim-Higher]

Interestingly, within the Sim-Lower sampling group, many coaches strongly felt that they could not manipulate their athletes. Coach 26 demonstrates this in the following quote: "I was trying to find that way to sell it to her. A lot of the time my powers of manipulation did not work on her." Relationship quality was also reduced in this sampling group for many of the coaches if they felt they were being manipulated by their athlete. For example, Coach 26 goes on to say, "If you know that you're being manipulated by an athlete, then you're going to be less likely to buy into the relationship and want to sort of work together on things." [Coach 26, Sim-Lower]

3.3.4.3 Dominance

The next inferential theme consists of six experiential themes across all the sampling groups apart from Sim-Higher. It resulted in the likelihood that coaches would want to dominate their athlete. Within the Sim-Lower sample, most of the coaches felt similarity led to a fight for dominance leading to a power struggle, resulting in lower complimentary behaviours, that could not be overcome within the relationship. Coach 25, who along with their athlete had the lowest levels of narcissism within the sampling group, explained how it was their level of similarity in narcissism that caused this fight for dominance:

> I think sometimes she could give a little less of that dominant side towards me. I'll give you an example. This morning when she turned up on poolside, she took her time to get in the pool a bit … She walked past me once to get her suit on, and then she strolled back in. I'm like, come on [Athlete's Name] let's go. I think in a sense, you think to yourself, you're taking the p*** a bit here and I am the one in charge. [Coach 25, Sim-Lower]

When there was dissimilarity in narcissism but higher relationship quality some of the coaches felt they could easily dominate their athletes but were careful not to. Coach 2, who was higher than their athlete in narcissism, demonstrates how they would see a lack of engagement as a sign he was being too dominant:

> I am quite dominant with him, just so they learn... I don't like to mollycoddle or help too much. But I had to learn quickly when I'm being dominant, they stop engaging, and I have to be a bit less dominant because you can push the relationship too far. [Coach 2, Dis-Higher]

Most coaches in the Dis-Lower sampling group also felt that being overly dominant, due to being higher than their athlete in trait narcissism, resulted in athletes just following what the coach wanted. This was reflected in the following quote from Coach 8: "The biggest challenge is making sure he doesn't tell me what I want to hear…The less times that happens, the more chance we've got at getting that shared vision and goal."

3.3.4.4 Controlling The Levels of Closeness

The next inferential theme consists of five experiential themes across all sampling groups apart from Sim-Higher. Coaches are likely to feel that similarity on narcissism allows for a closer relationship (i.e., more likely to achieve high levels of relationship closeness). Because of this, when coaches scored lower in narcissism, they felt they had to get out of their athlete's way to achieve higher relationship quality. Coach 3, who was lower than his athlete, demonstrates how he maintained higher relationship quality despite their level of dissimilarity:

> I think because I didn't have to sort of pull her along, I didn't have to motivate her, I didn't have to give her that drive because she's got it already…I suppose she demonstrated it quite a bit in the pool, you know, as a racer, head-to-head swimmer off the last wall, my money would be on [Athlete's Name]. So, in the water I didn't feel like I needed to cajole her to go faster, I didn't need to get her to race people to get the most out of her, she just did that already. Made my job a bit easier really, I just got out of her way and let her do her thing. [Coach 3, Dis-Higher]

When coaches were higher than their athlete in this trait, many strongly felt they had to pull their athlete up to equalise the level of intensity within the relationship. Coach 2 in the Dis-Higher sample demonstrates how this was evident in their relationship: "He's obviously quite laid back, so he needs somebody to keep saying, right you need to do this, … he needed the kick up the arse, to sort himself out." Because of this some of the coaches felt that due to their level of dissimilarity they had to give their athlete space at times. Coach 9 (Dis-Lower), who was lower than his athlete in narcissism, explains how being overbearing effected their relationship:

> If she went 2:03 on 200 freestyle and comes back in a strop. If I said but your dive was really good, she'd tell me to f**k off. I've learned that for some people or some situations. Saying nothing is more impactful and more important than just saying something to make someone feel better. [Coach 9, Dis-Lower]

3.3.4.5 Listening

The next inferential theme consists of two experiential themes across the sampling groups of Dis-Higher and Dis-Lower. This theme meant that dissimilarity affected how much the coaches

were willing to listen to their athlete and was indicative of both higher and lower relationship quality. When relationship quality was higher, some coaches who were lower than their athlete in narcissism felt that their athlete listened to them resulting in higher levels of commitment. Coach 6 in the Dis-Higher sample explains: "I would just say that he listened to my viewpoint probably even more. When I said that he needed to do things he respected it more". However, when coaches were higher than their athlete in narcissism, relationship quality was decreased because most of them found it hard to listen to their athlete's needs. An example of this can be seen in Coach 11's explanation of how their relationship is affected when their athlete does not feel listened to:

> I think there just becomes a lack of trust. You can flip it and put yourself in the swimmer's shoes. It's like, the b*****d doesn't listen to me. He's just making me do what he wants to do; he's not listening to me. I'm the high performer; he needs to listen to me. And even if you don't want to listen to them, you need to make them think that you're listening to them. [Coach 11, Dis-Lower]

3.3.4.6 Communication

The final inferential theme consists of three experiential themes across the sampling groups of Sim-Higher and Sim-Lower: coaches often believed that similarity in narcissism allowed them to communicate how they wanted. Within the Sim-Higher sampling group most of the coaches felt that similarity in narcissism allowed them to communicate directly and openly, resulting in higher levels of closeness, commitment and complementarity within the relationship. Coach 16, who along with his athlete had some of the highest levels of narcissism in the sampling group, explains: "It was like we fast tracked in a lot of ways I suppose. There was no bulls**t, there was absolutely zero bulls**t, it was straight to the point all the time. I can say anything I need to him." However, this level of openness led to some coaches feeling their athletes could be very harsh about their coaching ability, and often led to a reduction in coach-athlete relationship quality. Coach 17 explains: "[Athlete's Name] can be very vocal and brutally honest about my coaching. You know it's coming, so you're on your toes and you've already got the answer ready. Otherwise, it's very bad for our relationship."

3.3.5 Relationship Elasticity

The final dispositional theme refers to the notion that, dependent on their level of similarity, coaches are willing to endure differing amounts of tension within the relationship. The four inferential themes identified in this dispositional theme were: demanding relationship, natural conflict, investment of time, and clear expectations & boundaries.

3.3.5.1 Demanding Relationship

The first inferential theme consists of six experiential themes across the four sampling groups apart from Dis-Higher: coaches are likely to demand complimentary behaviours from their coach-athlete relationship. Most coaches in the Sim-Higher sample believed similarity in narcissism allowed for equal intensity in the relationship. Coach 20 thought that their relationship would breakdown if this were not present: "If I'm not matching her levels of intensity, if I'm not matching her levels of competitiveness, she'd be p***ed off, she'd have gone". However, most coaches in the Sim-Lower sample also felt similarity could lead to an over-demanding relationship and reduced relationship quality. Coach 25, despite having the lowest levels of narcissism within the sample explains:

> She wants to feel like she's getting something, she's not just turning up for the sake
>
> of turning up…I want to be a great coach, so I am always wanting to make sure I am
>
> getting the best out of [Athlete's Name]. Every single time I turn up to the session
>
> it's like I must give everything to [Athlete's Name] to make her better. [Coach 25,
>
> Sim-Lower]

3.3.5.2 Natural Conflict

The second inferential theme consisted of two experiential themes within the Dis-Lower sampling group only: coaches think conflict is a natural part of their relationship. Most of the coaches in this sampling group felt dissimilarity led to small continual disagreements. Coach 8, who was higher than his athlete in narcissism and had one of the biggest absolute differences in the sample, demonstrated how this manifested in their current relationship:

> Not a full disengagement, because he wants to please me…he'd drops from four
>
> kicks off the wall to three when I told him to do four. He will just do the turn rather

than try and tuck up tighter after I asked it to be tight…So it's just that 1% if you

like but these small things, we often fell out about. [Coach 8, Dis-Lower]

In addition, most of the coaches in this sampling group felt conflict was inevitable due to

being dissimilar. Coach 10, who was lower in narcissism than their athlete, said: "It was either

boom or bust... If it, if it blew up, it blew up big time… she was a f**king nightmare. Nothing

would avoid that happening."

3.3.5.3 Investment of Time

The third inferential theme consists of two experiential themes within the Dis-Higher and

Dis-Lower sampling group: coaches could be investing differing amounts of time due to being

dissimilar in narcissism which influenced the level of complementarity they experienced within the

relationship. Most coaches in the Dis-Higher group felt that respect came from an investment of

time with their athlete, and this enhanced their relationship quality. Coach 1 demonstrates how

when they increased their level of time with their athlete their relationship improved:

I think it just made me aware that he did appreciate the levels I was going through to

help him on his journey and the time I'd spend with him separately. In my limited

time, to have like a meeting here and there to arrange things, the time I put into him

in the Covid lockdowns and stuff where I had regular meetings with him where I

would help him. That all improved our relationship. [Coach 1, Dis-Higher]

The second experiential theme was resenting the time spent on their athlete. For example, if

the coach resented investment, relationship quality reduced. Coach 11, within the Dis-Lower

sample states:

I took the time to explain that to her, and she would understand it, but she would just

sort of have a meltdown, I would get frustrated with her especially, I was like, you

should really understand this now I am not going over it again. [Coach 11, Dis-

Lower]

3.3.5.4 Clear Expectations & Boundaries

The final inferential theme consists of two experiential themes within Sim-Higher and Dis-Higher sampling groups. When coaches outline their expectations, greater relationship quality is achieved. Many coaches within the Sim-Higher group felt it was important for the relationship to have clear boundaries because they were so similar. Coach 19 explained how that similarity allowed them to easily achieve this: "I wouldn't just roll over and give her what she wanted. It was a case of, there had to be lines drawn in respect to what my expectations were within training." Within the Dis-Higher sample, some of the coach's felt dissimilarity allowed them to be honest about what they wanted out of the relationship. Coach 2, who was higher than his athlete in narcissism and had the highest individual score within the sample explains:

> We might not always agree due to our dissimilarity in personality but there's a
> respect… I know my role and they know theirs and not be worried about sort of
> hurting one another's feelings, it's just, this is the goal, that's how we get there, let's
> go [Coach 2, Dis-Higher]

3.4 Discussion

To our knowledge this study is the first to explore how coaches' levels of narcissism influence their perception of relationship quality, as well as how similarity in trait narcissism affects coaches' views on the quality of their relationship. Our methodological approach allowed for the triangulation of quantitative (i.e., coaches' individual narcissism and relationship quality scores) and qualitative data sources (i.e., semi-structured interviews). Our research uncovers the influence of similarity in trait narcissism and how this affects coaches' perceptions relationship quality.

Coaches here typically perceived their relationships to be perfect and would not tolerate any flaws in their athlete's personality, despite their level of similarity or self-reported level of relationship quality. Individuals' high in narcissism perceive themselves to be superior to the people they are around (Roberts et al., 2018). Our study has revealed that this previously reported belief of superiority extends to coaches' perceptions of their coach-athlete relationship. Such beliefs could be due to the coach's lack of mutual understanding (i.e., co-orientation) potentially

heightening their feelings of vulnerability and the sense of being undervalued within their relationship because narcissists profess to be confident individuals who hold overly optimistic views of their abilities and performance achievements (Robins & Beer, 2001). Thus, similarity in narcissism may result in the coach becoming more committed and developing more complimentary behaviors in their relationship. This occurs not only because similarity on personality traits provides greater stability and connectedness (Jackson et al., 2011), but because it provides coaches with the opportunity to believe they can influence their athletes' performances through better relationships. According to Jowett & Shanmugam (2016), the fundamental goal of coaching is to achieve and maintain an effective coach-athlete relationship. Therefore, similarity on narcissism provides coaches with an instant self-enhancement opportunity through the belief that their relationship is perfect, and they can instantly demonstrate how good a coach they are (Hepper et al., 2014).

Similarity on narcissism resulted in a heightened perceived awareness of the athlete they were working with, which they believed allowed them to create an effective relationship, where they could unapologetically be themselves and foster a higher understanding of how to use their narcissistic tendencies, through complimentary behaviours, to be successful. In the coach-athlete relationship literature, the awareness someone has about their relationship has been identified as empathic accuracy (defined as the capacity to perceive, from moment-to-moment, the psychological condition of another, such as thoughts, feelings, moods, and the motivations and reasoning behind these behaviours; Ickes et al., 1990). Underpinning narcissists' behaviours is the motivation to adopt any sufficient response to favour their agentic (Campbell et al., 2007) or self-enhancement goals (Morf et al., 2011). Similarity on personality traits can also decrease disagreements, improve perceptions of a partner's emotions, and increase relationship longevity within a dyad (i.e., Rammstedt et al., 2013). Therefore, similarity on narcissism could potentially be allowing coaches to understand the behaviours of their athletes with greater accuracy. Yet coaches might not be utilising this heightened understanding of their athletes' behaviours to achieved greater relationship quality, instead choosing to fulfil their own grandiose needs as highlighted in Chapter 2. Future research should investigate whether similarity in narcissism does in fact enhance empathic accuracy. Such a question would be particularly suited to observational or

meta-perception approaches in the coaches' and athletes' own environment, in order to combat narcissists over inflation of their abilities (Roberts et al., 2018).

Coaches felt that similarity in trait narcissism allowed them to feel they could be themselves, which meant they encouraged their athletes to engage with narcissistic behaviours as they believed this would result in better performances. But this association between narcissism and performance is not necessarily as clear cut. Gabriel et al. (1994) found no relationship between narcissism and performance achievements even though narcissists believed they had performed well. In addition, Wallace and Baumeister (2002), provided convincing evidence that the narcissism-performance relationship is moderated by perceived opportunity for personal glory. Specifically, narcissists performed well when the opportunity for glory was high and poorly when low. Individuals in a leadership position who are high in narcissism also reduce their effort when opportunities for glory is minimal (Ong et al., 2016). Therefore, it is understandable why coaches view this trait as advantageous for building positive relationships in competitive sport, as it enhances their belief that their athletes will reach the highest level, whilst simultaneously providing themselves with an opportunity for personal glory. However, this study did not examine whether athletes perceived their coaches' narcissistic tendencies as beneficial to the quality of their coach-athlete relationship. Thus, future research in this area would do well to consider how similarity in narcissism influences both coaches' and athletes' perceptions of relationship quality.

Coaches felt that they possessed the power within their coach-athlete relationship and through trait narcissism they used a range of techniques, such as control, manipulation, and dominance. These techniques are frequently reported in relationship contexts with regards to individuals high in narcissism (Wurst et al., 2017). Whilst we would not condone these techniques to conflict harm on athletes, coaches viewed these methods as a key strategy that allowed them to create a positive relationship and a fundamental part of their coaching. Manipulation is often seen as a negative behaviour, our study demonstrated that coaches viewed it as a way to influence and address undesirable behaviours in their athletes without damaging their coach-athlete relationship. Additionally, it may have increased the coach's sense of self-worth, as they felt more effective in managing their athletes' behaviour while simultaneously reinforcing their own grandiose self-image. For instance, a narcissistic individual is often highly vulnerable to feelings of inadequacy

and unworthiness. To protect against these vulnerabilities, they may seek external validation (i.e., I must be a great coach because of how well I can manipulate and control my athletes to do what I want).

The power dynamic within the coach-athlete relationship has also been widely reported within coaching literature (Sonesh et al., 2015). Our findings have demonstrated that dissimilarity in narcissism influences the power dynamic of the coach-athlete relationship. Therefore, similarity in narcissism can enhance a coach-athlete relationship through a greater balance of power if both members are making joint contributions to achieve dyadic effectiveness (i.e., coach-athlete centred approach, Jowett & Slade, 2021). In this study, we used the Dark Triad Dirty Dozen (Jonason & Webster, 2010) to assess coaches' levels of narcissism. This measure primarily focuses on the grandiose aspect of narcissism (Maples et al., 2014), which may explain why coaches perceived themselves as having power over their athletes. Therefore, further research is needed, incorporating athletes' perspectives on different types of narcissism (e.g., grandiose versus vulnerable), to better understand how these traits influence the balance of power in the coach-athlete relationship.

Finally, depending on their level of similarity, coaches were willing to endure differing amounts of tension within their relationship. This study is the first to demonstrate from a coach's perspective that similarity on trait scores can also result in greater relationship quality through an acceptance of narcissistic behaviours. Despite narcissists reporting less commitment within romantic relationships (Campbell et al., 2002), similarity in narcissism for coaches allowed them to feel that they brought an equal intensity to the relationship and enabled them to avoid small but continual disagreements. Conflict in the coach-athlete relationship, like in all relationships, is inevitable. However, it is the ability to resolve and overcome this conflict that results in relationship maintenance, which is often difficult for individuals who are high in narcissism due to their proclivity to terminate relationships earlier and exhibit aggressive behaviours to their partners. (Keller et al., 2014). Davis et al. (2019) identified that communication support strategies (i.e., supporting individuals when things are not going well), motivation (i.e., being willing to work hard together), and conflict management (i.e., the ability to be understanding during disagreements) can help to redirect the negative effects of conflict towards a positive outcome within the coach-athlete relationship. Similarity in trait narcissism could be facilitating this process of greater

communication by allowing coaches to feel they are able to set and implement clear expectations and boundaries, which are vital in minimizing interpersonal conflict (Wachsmuth et al., 2018).

3.4.1 Methodological Approach

We employed the critical realism approach to thematic analysis outlined by Wiltshire and Ronkainen (2021). This methodological framework has provided valuable insights and key lessons, particularly in its application of the theme types; empirical, inferential, and dispositional, and their associated validity indicators. In addition, this method allowed for our methodology to combine qualitative and quantitative approaches, allowing for a greater understanding of the role of similarity and narcissism in the coach-athlete relationship making it ideal for the interdisciplinary approach employed in this study. The current study demonstrates how effective this approach can be, as the experiential, inferential, and dispositional themes help establish causality within qualitative research. These themes also have the potential to inform future participatory research and interventions, providing reliable and novel insights that can advance the development of existing theoretical frameworks, such as narcissism.

3.4.2 Strengths and Limitations

This study is the first to examine the effects of similarity in narcissism on coaches' relationship quality using a unique methodology. By purposely sampling coaches across differing levels of similarity, an in-depth understanding of the role narcissism plays in enhancing relationship quality has been established. The sample offers high ecological validity due to its size and composition, which not only ensures the data reflects the participants' perceptions of the "real" world but provides an overall picture of how similarity can affect the relationship quality of coaches. However, this study is limited by its focus solely on coaches who reported relatively low levels of narcissism within Chapter 2, which may not fully capture the complexity of the coach-athlete relationship and the reciprocal influence between both parties. Capturing the experiences and thoughts of the athletes the coaches were working with would have provided further triangulation of the themes generated. In addition, whilst the use of absolute differences has been widely used in sport psychology (Jackson et al., 2011), the extent to which the coaches were dissimilar to their athletes varied across the sampling groups (e.g., in the Dis-Higher sample, Coach 6 recorded an ABS of 16, while Coach 5, within the same sampling group, had an ABS of 8),

influencing how the themes have been generated. In addition, throughout Chapter 3, the term "lower relationship quality" is used to describe participants whose scores on relationship quality measures were comparatively lower than those in the higher relationship quality group. However, it is important to emphasize that these scores still fall within a moderate to high range and should not be interpreted as indicative of "poor" or "low-quality" relationships in an absolute sense and therefore would limit it's generalisability. Finally, while it has been recommended that research focus on a single sport to generate context-specific results (Hodgson et al., 2017), excluding team sports or other key team members, such as assistant coaches or team captains, where the quality of the coach-athlete relationship has been shown to be lower (Rhind et al., 2012), limits our understanding of how multiple personalities, varying levels of narcissism, and interpersonal dynamics outside a dyad influence the quality of the coach-athlete relationship.

3.4.3 Practical Implications

Our findings suggest that coaches should be aware of how narcissism would present in the sporting environment and the impact this could have on their working relationships. Roberts et al. (2015) also recommend working with (rather than against) an individual's narcissistic tendencies, whilst nurturing the relationship over time, and ensure opportunities for glory are continuously created (i.e., promoting to the athletes being the most prepared, or the hardest workers etc). As coaches have reported a greater likelihood of conflict when they are dissimilar in narcissism to their athletes, they should focus on conflict resolution, not conflict avoidance, to achieve and maintain a higher relationship quality. This study has also highlighted several practical strategies, such as coaches not being overly dominant or demanding within their coach-athlete relationships, designating specific time to listen to their athlete's needs, controlling how emotionally involved they are with their athletes, and creating clear expectations & boundaries of the relationship to ensure higher relationship quality is achieved and/or maintained.

3.5 Conclusion

This study sought to examine the extent to which coaches' own levels of narcissism influenced the perception of their relationship quality and determine how trait similarity influences their coach-athlete relationship. Using a targeted sampling methodology a unique insight into coaches' view of how narcissism influences their relationships was achieved.

Five dispositional themes where generated (perceived relationship perfection, high (perceived) self-awareness, breeding behaviours, relationship power, relationship elasticity) through the production of 18 inferential themes and 70 experiential themes. Whilst we would not condone the use of behaviours that would result in harm to coaches or athletes, the findings of this empirical investigation have provided an original and significant contribution to the coach-athlete relationship literature by extending the understanding of how narcissism impacts the experiences and behaviours that surrounds the relationship for coaches.

CHAPTER 4: "I THINK I KNOW WHAT THEY ARE LIKE": A LONGITUDINAL ETHNOGRAPHIC STUDY ON ENHANCING HIGH-PERFORMANCE COACH-ATHLETE RELATIONSHIPS THROUGH PERSONALITY AND RELATIONSHIP ASSESSMENTS

Abstract

The coach-athlete relationship is a vital contributing factor to performance success. Within this relationship it is essential to understand how the personalities of each dyad member, along with perceptions of partner personality influence relationship quality, in order to maximise success. This study explored how both coaches and athletes' personalities impacted the coach-athlete relationship in an 8-month period. The study consisted of three phases: an assessment phase, observation phase and an intervention phase. Using a mixed methodological design underpinned by critical realism, three high-performance coach-athlete dyads were purposefully recruited from elite swimming programmes in the United Kingdom. Analysis of the data, collected via personality and relationship assessments, semi-structured individual and dyadic interviews, as well as daily observations in both training and competition settings, uncovered five key themes: A Personality to Believe In; Exposed Behind Closed Doors; In Power, No Power, or a Fight for Power; Close or Too Close? and Work With Me. The findings suggest that personality and relationship assessments can be a valuable tool for improving the alignment between coaches and athletes, ultimately enhancing their coach-athlete relationship.

Keywords: Coach-Athlete Relationships, Dyads, High-Performance, Narcissism, Critical Realism

4.1 Introduction

The personalities of high-performance coaches and athletes play a vital role in shaping the success of their coach-athlete relationship, which is essential in elite sport. In the intense environment of Olympic competition, where success is measured by the number of medals won, building a strong, high-quality relationship is critical. The coach-athlete relationship is most effective when both coaches and athletes collaborate equally in their pursuit of success (Jowett & Slade, 2021). Conceptualised through the 3 + 1Cs model (Jowett, 2007), the coach-athlete relationship consists of four components: closeness (e.g., respect, trust, appreciation), commitment (e.g., wanting to maintain a close relationship over time), complementary behaviours (e.g., approachability and responsiveness), and an ability to work together with a co-orientated approach (e.g., sharing of knowledge and understanding). The effectiveness of the coach-athlete relationship is directly influenced by how high-performing individuals interact with and perceive one another, something that is shaped, at least in part, by the personality traits of those involved (Stanford et al., 2022).

4.1.1 Personality and the Coach-Athlete Relationship

In recent years, research has increasingly focused on how personality traits influence the dynamics of coach-athlete relationships. Foulds et al. (2019) found that when coaches exhibited traits such as diligence, competitiveness, and curiosity, athletes perceived their relationships with these coaches as stronger and more effective. Similarly, Jackson et al. (2011) investigated the role of the Big Five personality traits, extraversion, agreeableness, openness, conscientiousness, and neuroticism, in shaping commitment and relatedness within these relationships. They discovered that when both coaches and athletes identified themselves as agreeable, conscientious, or extraverted, they reported greater feelings of commitment and connection. Moreover, having a partner who was perceived as agreeable or conscientious was linked to stronger relational bonds. Yang et al. (2015) also examined the influence of the Big Five and found that neuroticism negatively impacted the perceived quality of the coach-athlete relationship, while extraversion and conscientiousness had a positive effect. Interestingly, only the athletes' traits, specifically conscientiousness, extraversion, and neuroticism, affected how coaches viewed the relationship; the coaches' personality traits did not significantly influence the athletes' perceptions. While there

has been a growing shift toward examining traits beyond the Big Five (Roberts & Woodman, 2017), particularly those more specific to high-performance environments, focusing exclusively on a single trait or a narrow set of traits risks overlooking the complexity and nuance of an individual's personality. Considering both broad personality traits alongside traits that are potentially relevant to elite sporting contexts, allows for a more nuanced and comprehensive understanding of how a person's personality impacts the coach-athlete relationship.

One trait that emerged as a highly relevant trait within high-performance sport is Narcissism because it allows individuals to show the world how good (they think) they are. An individual high in narcissism could be defined as someone who is "self-centred, self-aggrandizing, entitled, dominant, and a manipulative interpersonal orientation" (Morf et al., 2011 p. 400). Athletes high in narcissism have been associated with higher sporting performance due to a stronger competitive orientation (Vaughan & Madigan, 2021). In addition, coaches' who score high in narcissism have been positively associated with producing faster end of season performances as they provide athletes with a mindset that high-profile competitions are positive opportunities for self-enhancement (Nevicka et al., 2023). While individuals with high levels of narcissism are often characterised by being confident, charming, and having a positive view of their own abilities, characteristics that can be highly advantageous in competitive settings, they can also exhibit socially insensitive, selfish, hostile, and aggressive behaviours in interpersonal relationships (Wurst et al., 2017). Coaches higher in this trait also demonstrate a more a controlling interpersonal coaching style (Matosic et al., 2017) which may also be damaging to the quality of their coach-athlete relationship. From a performance perspective, Cook et al. (2021) found Olympic gold medal winning coaches (i.e., those coaching at the highest level achieving peak performance) are actually lower in narcissism than Olympic non-medal winning coaches, and therefore as a result may have a more positive coach-athlete relationship allowing them both to experience greater sporting success. However, the full extent of how narcissism and its different aspects (i.e., grandiose versus vulnerability) impacts the coach-athlete relationship remains less understood.

Some empirical research has started to emerge by examining the role of narcissism in the coach-athlete relationship. For example, Chapter 2 found that greater dissimilarity in narcissism (i.e., greater differences in narcissism scores between coaches and athletes) resulted in higher

relationship quality for coaches, and higher levels of narcissism in coaches negatively affected their behaviours (i.e., complementarity) toward their athletes. Interestingly, the athletes' level of narcissism had no effect on either their own relationship quality or that of their coach. Chapter 3 highlighted how coaches perceived narcissism as shaping the way their relationships with athletes functioned. Importantly, narcissism can be examined through its distinct dimensions (e.g., admiration vs. rivalry; grandiose vs. vulnerable), which influence interpersonal dynamics in different ways. Such as admiration is often linked to confidence, assertiveness, and even motivational benefits, whereas rivalry is associated with hostility, defensiveness, and conflict (Back et al., 2013). Investigating narcissism at this dimensional level therefore provides a more nuanced understanding than a simple "high vs. low" dichotomy, capturing how particular expressions of narcissism may disrupt or, in some cases, facilitate the coach–athlete relationship. This is especially relevant in coaching contexts, where self-confidence and authority (features of admiration) can be rewarded, but antagonism and distrust (features of rivalry) may undermine relationship quality. To date, this work remains cross-sectional, and several studies (e.g., Tshube & Hanrahan, 2018; Contreira et al., 2019) have emphasised the need for longitudinal approaches in coach–athlete relationship research. Such studies would provide a deeper understanding of how the daily interactions between coaches and athletes, as well as their personalities, influence the dynamics and quality of their relationship over a season. To date, there have been limited research which has examined such relationships over time, thus doing so would be a significant addition to the literature.

4.1.2 Strengthening the Coach-Athlete Relationship Through Comprehensive Assessments

Comprehensive assessments of a person's personality are being increasingly utilised by sports psychology consultants and practitioners to deliver interventions that are tailored to the individual. Comprehensive personality assessments have been shown to enhance athlete self-awareness (Cotterill & Moran 2017), foster a shift in mindset across organizations, (Shambrook, 2009), and/or support athletes with career transitions (Lavalee, 2005). When used effectively, these assessments can enhance a person's understanding of themselves, understanding of others, thus allowing them to adapt and connect better within their relationships (Beauchamp et al., 2007). Rowles and Holder (2023) investigated how sport psychology consultants perceive the use of

personality assessments. They found that alongside increasing their client's self-awareness, assessments can foster an acceptance of individual differences, as well as support higher athletic performances. From a coach-athlete relationship perspective, whilst it has been proposed that increasing individual's awareness through a comprehensive assessment impacts the relationships an individual has in sporting environments, these assessments currently only focus on an individual's personality in isolation, failing to consider the profile of their current relationship, as determined by the 3 + 1Cs model of closeness, commitment and complementarity (Jowett, 2007).

In conjunction with a combined personality and relationship assessment to create an individualised profile, supporting and mentoring coaches or athletes on how their personalities are impacting their relationships have started to emerge as a possible way of enhancing relationship quality and overall performance. For example, Ferrar et al. (2018) demonstrated that the elite coach-athlete relationship can be strengthened when elite coaches' interpersonal skills are developed through specialised seminars that highlight various personality types encountered in high-performance environments. This heightened awareness fostered more productive communication and increased coach effectiveness (Coulter et al., 2016; McAdams, 2013). Additionally, interventions that focused on enhancing coaches' perceptions of their communication skills and the co-orientation within their coach-athlete relationships have proven effective in strengthening coaches' views of their relational bonds with athletes. However, this improvement in coaches' perceptions did not translate to a corresponding increase in athletes' perceptions of their relational bonds with their coach (Haugan et al., 2021). This may be because the current approaches often rely on self-reported measures and fail to consider the interdependence of the coach-athlete relationship, typically addressing coaches and athletes separately rather than as a dyadic unit, as well as not consider the impacts of meta-perspectives (i.e., the coach's perspective on their athlete's personality traits, and how their athlete viewed their relationship).

4.1.3 The Present Study

Despite there being a growing insight into how personality traits influence a high-performance coach-athlete relationship, current research reveals several limitations that warrant further investigation. Although empirical research has identified and examined the interaction of personality traits they currently rely heavily on cross-sectional quantitative methods. This approach

overlooks the dynamic, day-to-day interactions between coaches and athletes and how these interactions impact the quality of their relationship over time. This empirical study has, therefore, adopted a mixed method approach, utilising personality and relationship assessments in conjunction with semi-structured individual, dyadic interviews, and daily observations in both training and competition settings, to examine how coaches and athletes' personalities impacted their relationship not only day-to-day, but over an eight-month period. Furthermore, the study offers an individualised tailored intervention element, focusing on the intrapersonal, interpersonal, situational impacts and meta-perspectives of coaches and athletes' personalities and current relationships as defined by the 3 + 1Cs model (Jowett, 2007). The goal of this intervention is to support coaches and athletes in conjunction with their personality and relationship assessment, to enhance their coach-athlete relationship.

4.2 Method

4.2.1 Participants and Biographies

Three high-performance swimming coach-athlete dyads took part in the study. A small sample size was targeted as it was considered representative of this population due to the limited number of elite coach-athlete relationships currently working within the United Kingdom. A small sample size also allowed for an individualised approach to each coach-athlete dyad. Coaches were all British males, had coached for eight to 20 years ($M_{experience}$ = 13.5 ± 6.1 years), and ranged in age from 39 to 45 years old (M_{age} = 41.7 ± 3.1 years). The athletes were two female swimmers and one male, and ages ranged from, 24 to 26 years old (M_{age} = 25.6 ± 0.7 years) and were from a range of nationalities. Coaches-athletes' dyads were selected if they could be considered to classified as World Class Elite defined by Swann et al. (2015) as well as being part of a current coach-athlete relationship for a minimum of six months (Jowett, 2006). These dyadic pairings had been working together for two and a half to six years ($M_{relationship\ length}$ = 3.9 ± 1.9 years) and worked on average 19 hours a week together (SD = 5.2). At the start of the study, the coach and athlete participants had collectively won medals at a World, European and Commonwealth level. This resulted in a combined total of nine gold, seven silver and ten bronze medals. However, at the time data collection was completed neither the coach nor the athletes had won an individual Olympic medal

together. To protect participant anonymity whilst ensuring the richness of the data remains, pseudonyms have been used when presenting information about the participants.

Henry (C1) and Victoria (A1): Henry was an international swimmer himself and has coached multiple international swimmers. Victoria has been one of his highest performing athletes to date and was an established international athlete prior to being coached by Henry. Henry and Victoria have been working together for three years and every year Victoria, to this point, has improved under Henry's coaching, as shown by her personal best times.

Michael (C2) and Anne (A2): Michael has coached athletes to win medals at World, European, and Commonwealth level and has coached at two Olympic games. He has been coaching Anne for eight years. She has won medals at all major championships and has repeatedly qualified for Olympic finals under Michael's guidance.

Christopher (C3) and George (A3): Christopher has been coaching for 20 years and has developed multiple athletes to be senior international swimmers. George is a World Champion in the Short Course pool and has also repeatedly qualified for Olympic finals at previous games under Christopher.

4.2.1.1 The Lead Researcher

The lead researcher is not only a researcher in the field of personality and coach-athlete relationships, but also has 15 years of coaching experience in swimming. He is currently a Performance Director in an English Performance Centre, coaching at a competitive elite level as defined by Swann et al, (2015). This has supported his understanding of the context of high-performance swimming. While the lead researcher knew the coaches involved in this study before data collection began, there was no prior working relationship between them, which helped minimise potential bias. To further ensure objectivity and to safeguard both the lead researcher and participants, whilst the lead researcher was working or observing in the high-performance environment, he held monthly consultations with the wider research team, who combined had 74 years of working with elite sports in a coach development or/and chartered psychologists' roles as well as 35 years of specialist knowledge in researching personality to provide feedback on observations and feedback on ongoing data collection. In addition, each participant was offered

additional support independent from the lead researcher via a member of the research team who was psychologically trained.

4.2.2 Research Design & Theoretical Framework

This research was underpinned by critical realism, a philosophical approach that distinguishes between the "real" world and the "observable world. According to critical realists, the world is constructed by our own perspectives (e.g. through what is 'observable') and unobservable structures cause observable events. Therefore, to understand the influence of an individual's personality on their high-performance coach-athlete relationship, a deeper understanding of stable, socially constructed patterns, must be discovered (Wiltshire et al., 2018). From a critical realism standpoint, using a mixed-methods approach allows for the triangulation of multiple data sources (e.g., observations, interviews, and quantitative data). Therefore, within this study we employed a longitudinal mixed-methods approach over an eight-month period, from January to August 2023. This timeframe corresponds to the championship stage of the swimming season, including the 20th edition of the World Aquatic Championships and the season preceding the Olympic Summer Games in Paris. The study consisted of three phases: an assessment phase, observation phase and an intervention phase, the latter two of which overlapped with each other (see Figure 4).

Figure 4

Methodological Design Illustrating Time Points, Observation Phase, Peer Support and Interviews

Data Collection Points
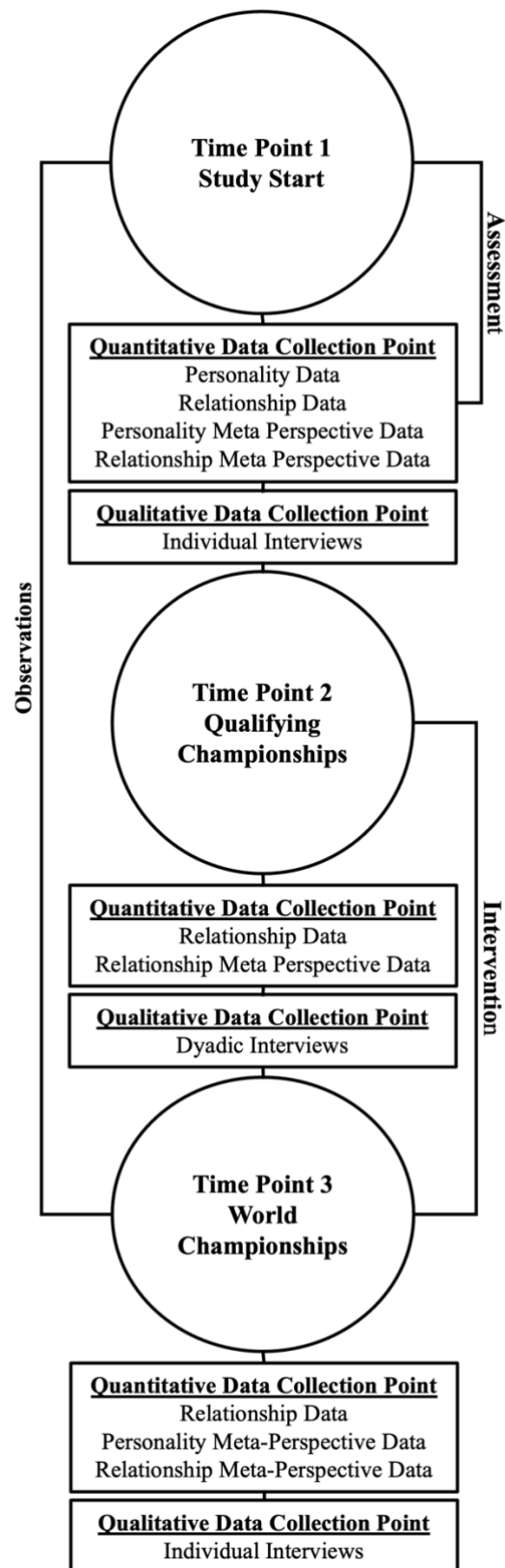
4.2.2.1 Assessment

The assessment phase aimed to help the lead researcher evaluate what were the common tendencies of each individual within the study. This ran from Time Point 1 for the first two weeks of the study and allowed the lead researcher to minimise preconceived notions about the dyads, understand typical daily interactions between the dyads, as well as time for him to formulate what interactions were relevant in influencing the individual coach-athlete relationships.

4.2.2.2 Observations

The observation phase was designed to allow the dyads to interact without interference. This process enabled the lead researcher to gain a live and real time insight into the dynamics of their relationship and understand how their personalities influence the quality of those relationships. This phase spanned the whole of the research period, starting at the beginning at Time Point 1 and finishing just after the World Championships at Time Point 3. For the initial four months the lead researcher took a solely observational role, allowing the dyads to interact without any external diversions. The observation was conducted before the peer support phase to help the lead researcher identifying what areas of support, he may be able to provide after Time Point 2. The dyads were observed both inside and outside the training environment approximately 4 times weekly, including in the lead-up to competitions, during the qualifying championships, and up until they travelled to the World Championships. Observations were conducted on different days and at various times to capture their wide range of training and potential different types of interactions.

4.2.2.3 Intervention

The intervention phase was designed to help the lead researcher understand participants through their relationship and personality profiles, while simultaneously enabling the participants to develop greater insight into how their own personalities influenced their coach-athlete relationship. The goal was not to change participants' personalities, but to support them in working more effectively with their partner's traits in

order to foster a higher quality coach-athlete relationship. This approach aligned with the recommendations of Roberts et al. (2015), who advocate working with individuals' personalities rather than against them. These strategies were scaffolded by three interrelated approaches: intrapersonal understanding (how participants perceived and made sense of their own personality traits), interpersonal understanding (how those traits influenced and were influenced by their partner's behaviour and personality), and an interactionist perspective on personality, which recognises the dynamic interplay between relatively stable traits and the relational contexts in which they are expressed. These frameworks collectively informed the structure and delivery of the intervention. In line with the interactionist perspective, the lead researcher and wider research team adopted a neutral stance toward the value or appropriateness of any particular trait.

The personality and relationship assessments played a central role in facilitating the intervention phase by serving as shared reference points that guided reflection and discussion. Rather than being treated as fixed diagnostic tools, the personality and relationship assessments developed in the initial phase were used as dynamic, interpretive resources throughout the intervention. These profiles enabled open reflection and mutual understanding, helping both the researcher and participants make sense of evolving relationship dynamics. By revisiting the profiles regularly, participants could explore how their individual traits influenced key moments of tension, misunderstanding, or connection within the coach-athlete relationship. This process supported ethnographic dialogue and encouraged participants to consider how they might adapt their behaviour to enhance collaboration and improve relationship effectiveness over time.

This four-month phase ran alongside the observation phase, starting after the qualifying Championships (Time Point 2) and concluding at the end of the World Championships (Time Point 3). During this period, the lead researcher adopted a more hands-on approach with each coach-athlete dyad. This involved working closely with both coaches and athletes, addressing strategies both as pairs and individually. The lead researcher observed these pairs to assess the impact of each strategy and conducted

immediate and weekly one-on-one debriefs with each participant to evaluate how effective they found the strategies. The strategies were introduced at Time Point 2 and then individually evaluated at Time Point 3.

4.2.2.3.1 Strategy 1. This strategy focused on the interpersonal dynamics within the coach-athlete relationships by adapting communication styles to match each partner's personality. Ferra et al. (2018) demonstrated that tailoring communication, considering factors such as content, language, tone, and delivery, to suit a partner's personality can enhance interactions and provide clear direction while maintaining authenticity in high-performance environments. Similarly, communication strategies have been shown to strengthen the quality of the coach–athlete relationship (Davis et al., 2019). As a result, coaches and athletes were encouraged to adapt their communication methods to better reflect their partner's traits, as identified in their personality assessments, and to consider the potential impact on their current relationship. For example, if an athlete's personality assessment suggested they viewed themselves as unapologetically ruthless in their pursuit of excellence, with a willingness to dominate others, the coach might adapt their feedback to emphasise challenge and competitiveness, using phrases such as, "Can you prove to yourself that you can raise the bar in front of everyone here?" or "I expect you to impose your pace on this set." Before implementing any new phrases in training, the lead researcher worked with each participant to identify what the new communication would look like and how that could be effective on their current partner, considering both their own and their partner's personalities. The researcher then observed training sessions as these new communication styles were applied and subsequently engaged participants in reflection on how the wording, tone, and delivery influenced their partner's responses and the overall quality of the relationship. The new communication was then refined and re-tested in subsequent sessions.

4.2.2.3.2 Strategy 2. This strategy focused on the intrapersonal aspects of personality and their impact on how individuals perceive their relationships. It recognised that high-performance environments can be stressful and that a person's personality traits

influence how they cope and behave in these situations (Allen et al., 2011; Kaiseler et al., 2012). The goal of this strategy was to help coaches and athletes identify personality traits that could strengthen their relationships during high-stress moments, such as competitions. Participants used their personality and relationship assessment to pinpoint traits that positively contributed to their relationships and aimed to optimise these traits effectively in high-pressure situations. For example, if a coach's personality assessment identified to them that they had a strong desire to avoid humiliation and failure, resulting in an underdog mentality under pressure, they might become overly cautious in their decision-making, hesitate to take bold tactical risks, or frame the situation to their athlete as a "nothing to lose" opportunity. This could lead them to focus on safe, conservative race strategies rather than innovative ones, or alternatively, to over-motivate their athletes by leaning into the narrative of being underestimated. Therefore, this strategy encouraged coaches and athletes to develop greater self-awareness of how their personalities influence their own responses with their relationships. In conjunction with feedback from the lead researcher's observations during training and competitions, they collaboratively identified practical ways to channel these tendencies into constructive behaviours within the coach-athlete relationship, especially during high-pressure moments.

4.2.2.3.3 Strategy 3. This strategy draws on Bower's (1973) interactional approach to personality, which suggests that behaviour emerges from the interplay between an individual's traits and the situations they encounter (trait × situation = behaviour). Therefore, this strategy tries to enhance the coach-athlete relationship by participants understanding how their personality traits and the contexts they are both current in shapes their and their partners behaviour within their relationship. Participants were prompted to reflect on past interactions, considering how their own personalities and environmental factors influenced their current relationships, either positively or negatively. Building on these insights, they were encouraged to experiment with different situational contexts (e.g., formal versus informal settings) to harness both personalities and environment to facilitate positive

interactions. For instance, a coach or athlete with an assertive, confident temperament might benefit from meeting outside the traditional training environment, such as in a coffee shop rather than the coach's office, to foster more open, collaborative engagements. Likewise, altering typical interactions between a coach and an athlete in swimming, where coaches usually stand poolside looking down while athletes remain in the water looking up at the coach, could create a more balanced interaction together and strengthening mutual understanding. The lead researcher worked one-on-one with coaches and athletes to see how their personalities and the environment shaped current behaviour in their high-performance relationship. They looked at whether the current setup helped or got in the way of relationships and brainstormed ways to tweak things to improve those interactions. Progress and any changes were discussed in during weekly meetings with the lead researcher.

4.2.3 Data Collection

4.2.3.1 Quantitative Data

Quantitative data and meta perspectives were taken at Time Point 1, 2 and 3 (see Figure 4) using self-report questionnaires completed by all participants.

4.2.3.1.1 Ten Item Personality Inventory (TIPI: Gosling et al., 2003). The TIPI is a 10-item questionnaire which measures the "Big Five" personality traits: openness to experience (2 items i.e., open to new experiences, complex), conscientiousness (2 items i.e., dependable, self-disciplined), extraversion (2 items i.e., extraverted, enthusiastic), agreeableness (2 items i.e., sympathetic, warm), and emotional stability (2 items i.e., calm, emotionally stable). Participants completed these items with the contextualised stem of "As a coach/athlete, I see myself as some who" when evaluating their own personality and "I see my coach/athlete, as someone who" when evaluating their partner's personality. All items were rated on a 1 (Strongly Disagree) to 7 (Agree Strongly) Likert Scale. This measurement has consistently reported Cronbach's alpha coefficients above 0.7.

4.2.3.1.2 Narcissistic Personality Inventory (NPI, Raskin & Hall, 1979). The NPI is a 40-item forced-choice inventory which measures the grandiose component of

narcissism. For each item, participants are asked to choose between one narcissistic and non-narcissistic statement (e.g., A - I will be a success or, B - I am not too concerned about success). The number of narcissistic responses is totalled to give an overall narcissism score, with a range of 0-40. Barry and Malkin (2010) divided the scoring of the NPI-40 into two categories: 14 items that reflect self-sufficiency and authority, which they labelled adaptive narcissism, and 18 items that reflect exhibitionism, exploitativeness, and entitlement, which they labelled maladaptive narcissism.

4.2.3.1.3 Narcissistic Admiration and Rivalry Questionnaire (NARQ, Back et al., 2013). The NARQ is an 18-item questionnaire that measures both narcissistic admiration (9 items e.g., "I show others how special I am") and narcissistic rivalry (9 items e.g., "other people are worth nothing") on a six-point Likert Scale from 1 (*strongly disagree*) to 6 (*strongly agree*). These items were answered in relation to a contextualised stem of "I see myself as…" when evaluating their own personality and "I see my coach/athlete as…" when evaluating their partners personality. This measurement has consistently reported Cronbach's alpha coefficients above 0.7.

4.2.3.1.4 Hypersensitive Narcissism Scale (HSNS, Hendin & Cheek, 1997). The HSNS is a 10-item questionnaire measuring the covert aspect of narcissism. All items were rated on a 1 (*Not at all*) to 6 (*Agree completely*) Likert Scale using a contextualised stem of "I see myself as…" when evaluating their own personality and "I see my coach/athlete as…" when evaluating their partners personality. This measurement has consistently reported Cronbach's alpha coefficients above 0.7 (Fossati et al., 2009).

4.2.3.1.5 Coach-Athlete Relationship Questionnaire (CART-Q; Jowett & Ntoumanis, 2004). The CART-Q is a 11-item questionnaire that measures both coaches' and athletes' levels of closeness (3 items i.e., "I like my coach"), commitment (4 items i.e., "I feel committed to my athlete") and complementarity (4 items i.e., "When I coach my athlete, I am ready to do my best"). All items were rated on a 1 (*Strongly Disagree*) to 7 (*Agree Strongly*) Likert Scale. This measurement highlights personal and meta perspectives

of the quality of the coach-athlete relationship and has consistently reported Cronbach's alpha coefficients above 0.7, with adequate internal reliability (Jowett & Ntoumanis, 2004).

4.2.3.2 Qualitative Data

Participants took part in semi-structured interviews at all three-time points. At Time Point 1 coach and athletes took part in an individual interview with the lead researcher. Interviews ranged in duration between 67 minutes to 87 minutes ($M_{duration}$ = 76 minutes ± 10.5). These interviews were online (via Microsoft Teams), and in-person based on the availability of the interviewee. During these interviews, participants outlined their perceptions of their relationship and were provided the opportunity to discuss how they felt their personality influenced their relationship. In addition, personality and relationship profiles were presented to the participants to provide feedback on their accuracy and how their personality might impact their relationship at present. At Time Point 2 coaches and athletes were interviewed together. During this dyadic interview both participants discussed how they felt their personalities interacted and the impact of this on their relationship. Interviews ranged in duration between 45 minutes to 56 minutes ($M_{duration}$ = 52 minutes ± 4.0) and these interviews were online only. Also, during these interviews the lead researcher outlined the three strategies of the peer support phase. This provided the opportunity for participants to ask any questions and clarify their understanding of the strategies. At Time Point 3 coaches and athletes returned to individual interviews where they could reflect on how they felt their relationship might have changed over the season, the impact of understanding their coaches or athletes' personalities on their relationship and evaluated the effectiveness of the peer support phase. Interviews ranged in duration between 28 minutes to 58 minutes ($M_{duration}$ = 45 minutes ± 9.5) and were online and in-person.

In addition to the semi-structured interviews, the lead researcher collected data by observing the dyads in their training and competition environment. Over the course of the 8 months the lead researcher attended weekly training sessions which resulted in over 450 hours of data being collected. These observations were recorded in comprehensive field

notes generated when watching the dyads at Time Point 1 and 2 and immediately after conversations, meetings, or events at Time Point 1 to 3. In addition, the lead researcher recorded videos of his initial thoughts and feelings of what he had observed at the end of each day.

4.2.4 Data Analysis

4.2.4.1 Personality & Relationship Assessment Profiles

Assessment profiles were initially created on the participants' own self-reported scores on each scale and two contextual questions of "what standout information about your swimming background and upbringing? (e.g., personal/family influences, motivations, challenges etc.) do you think might have shaped your personality" and "is there other additional information that you think has shaped your personality today?" were added in the questionnaire pack by the research team administered after the assessment component. The research team discussed each participant's replies to the questions, scores across the data set and between scales. The lead researcher then drafted the potential profiles. These profiles were reviewed independently by the rest of the research team before another group meeting to refine the proposed profiles. This process was repeated until all members where happy that the profiles reflected the personalities and relationships of the participants based on all the available data. This was then repeated for the meta-perspectives (for example, the coach's perspective on their athlete's personality traits, and how their athlete viewed their relationship). These meetings ranged from 100 minutes to 121 minutes ($M_{duration}$ = 110 minutes ± 14.8).

4.2.4.2 Interviews and Observations

All interviews, observational reflective videos and observational notes were transcribed verbatim into 277 single-spaced A4 pages. Reflexive thematic analysis was conducted to produce rich social and psychological meaning (Braun & Clarke, 2013). Reflexive thematic analysis is not aligned with any philosophical approach so can be analysed through the lens of critical realism. In order to report the presumed singular reality

within the data, Braun & Clarke's (2006) six phases of thematic analysis were employed. Phase 1 - Familiarisation: A re-immersion process by the lead researcher was conducted by reviewing again all the online interviews and observation footage and re-reading of all transcripts. Any initial interpretive thoughts were noted down in a word document. Phase 2 - Generating codes: once the lead researcher felt re-immersion was achieved, a predominately inductive coding process of each transcript was conducted that aligned to the aims of the study. This was only done by the lead researcher because he was the only person in the research team who had fully immersed himself in the data. Aligned with critical realism approaches, a re-checking and re-analysing process of the codes were conducted to ensure accurate perceptions of the participants reality was being reported (Ronkainen & Wiltshire, 2019). Phase 3 - Searching for themes: the codes were then ordered to define any recognisable developing themes, this was done for each timepoint independently at first and were brought all together into a Microsoft Excel document, which enabled codes to be easily manipulated so that themes could be searched for across participants and time points to allow for a shared meaning to be identified. Once this was completed the developing themes were presented to the remaining members of the research team for a review. Phase 4 & 5 - Reviewing and Defining Themes: once the recognisable developing themes had been reviewed by everyone the necessary amendments were made and another review took place. A frequent discussion point was to check if the themes accurately represented the codes and could be triangulated by the lead researchers' observations of the dyads. The lead researcher then went back to the data to check that quotes, coding, and themes were accurately represented, ensuring that critical realism ontology was maintained. A reflexive process then occurred with the lead researcher evaluating the questions raised by the research team. Meetings took place that allowed for the themes to be updated. This was again repeated until all themes were refined and defined to a point which represented the data set. Definitions were developed for each finalised theme to ensure a clear understanding of what each theme meant and how it was representing the data. Phase 6 - Producing the report: a final reflexive engagement of the data was achieved in the report writing process. Further feedback from

the research team was given on the definitions of themes and removal of themes until everyone was content with the final analysis.

4.2.5 Methodological Rigor

To ensure trustworthy conclusions were achieved the third principle of critical realism, judgemental rationality, was achieved by the research team during the data analysis process. In addition, the appointment of a "critical friend" via the wider research team ensured both interpretations of the personality and relationship profiles and qualitative data analysis represented an accurate and plausible interpretation of the research findings (Smith & McGannon, 2018). This approach was not to try and achieve an agreement with the lead researcher but to ensure the findings were consistent with the ontological position of critical realism. Specifically, the critical friend approach ensured descriptive validity, which are the subjective viewpoints of the participants, were scrutinised by being repeatedly checked to ensure they were reported accurately, interpretations made about the dyads were plausible via the integrity of the research team and any theoretical conclusions were challenged by the reflexive process at all stages of the analysis. This guaranteed that any presuppositions or judgement from the research team was removed, allowing for the findings to be safeguarded (Maxwell, 2017).

4.3 Results

The reflexive thematic analysis generated five themes: a personality to believe in; exposed behind closed doors; in power, no power, or a fight for power; close or too close, and work with me. The strategies (Table 5) were proposed during the intervention phase and helped to support these themes to differing degrees through phase 2 into phase 3 of the study. Each dyad exhibited a unique awareness of each other's personality traits (Table 4) at the start of the study, which evolved over the course of the intervention. The shift in their meta-perspective from Time Point 1 to Time Point 3 is illustrated in Figure 5. Additionally, changes in relationship quality and dyadic meta-perspective across all time points are shown in Figure 6.

Figure 5

Dyads Own and Partner Meta Perspectives of Personality Traits at Time Point 1 and 3

Herny (C1) & Victoria (A1)

Michael (C2) & Anne (A2)

Coach Own Time Point 1 — Athlete Meta Time Point 1 — Athlete Meta Time Point 3

Athlete Own Time Point 1 — Coach Meta Time Point 1 — Coach Meta Time Point 3
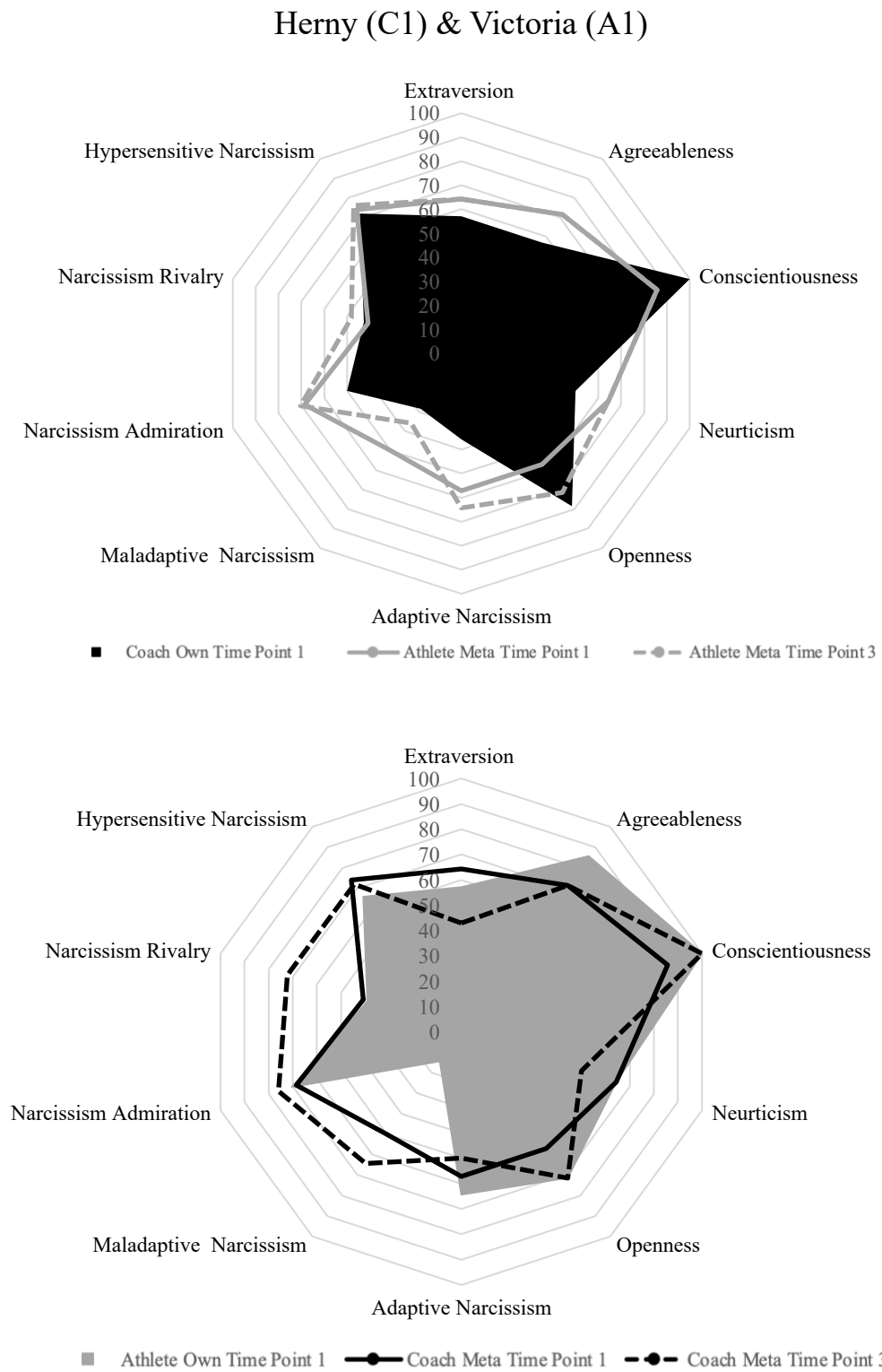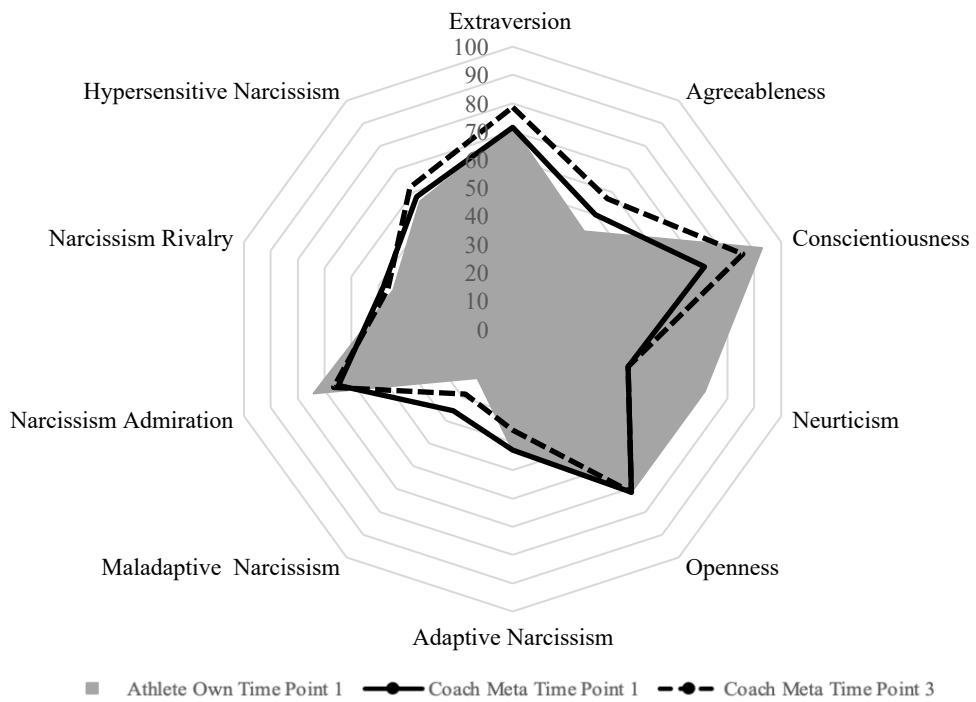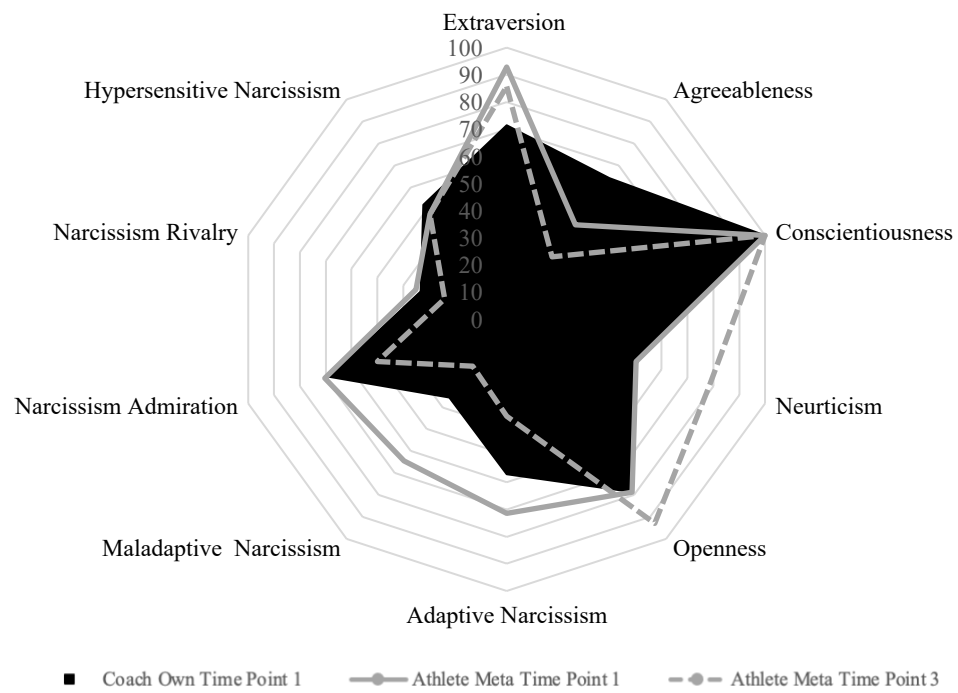
Christopher (C3) & George (A3)

Extraversion
100
90
80
70
60
50
40
30
20
10
0

Hypersensitive Narcissism · Agreeableness · Conscientiousness · Neurticism · Openness · Adaptive Narcissism · Maladaptive Narcissism · Narcissism Admiration · Narcissism Rivalry

- ■ Coach Own Time Point 1 —●— Athlete Meta Time Point 1 - ●- Athlete Meta Time Point 3

Extraversion
100
90
80
70
60
50
40
30
20
10
0

Hypersensitive Narcissism · Agreeableness · Conscientiousness · Neurticism · Openness · Adaptive Narcissism · Maladaptive Narcissism · Narcissism Admiration · Narcissism Rivalry

- ■ Athlete Own Time Point 1 —●— Coach Meta Time Point 1 - ●- Coach Meta Time Point 3

Figure 6

Dyads Own and Meta-Perspectives of their Coach-Athlete Relationship Over All Three Times Points

Table 4

Personality and Relationship, Self and Partner, Assessments

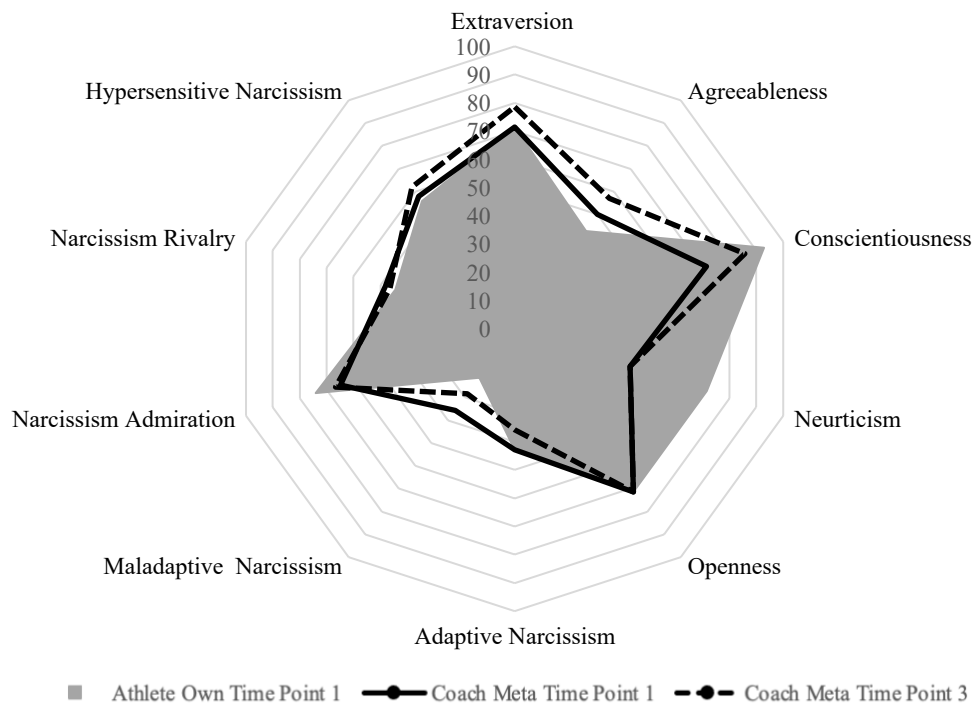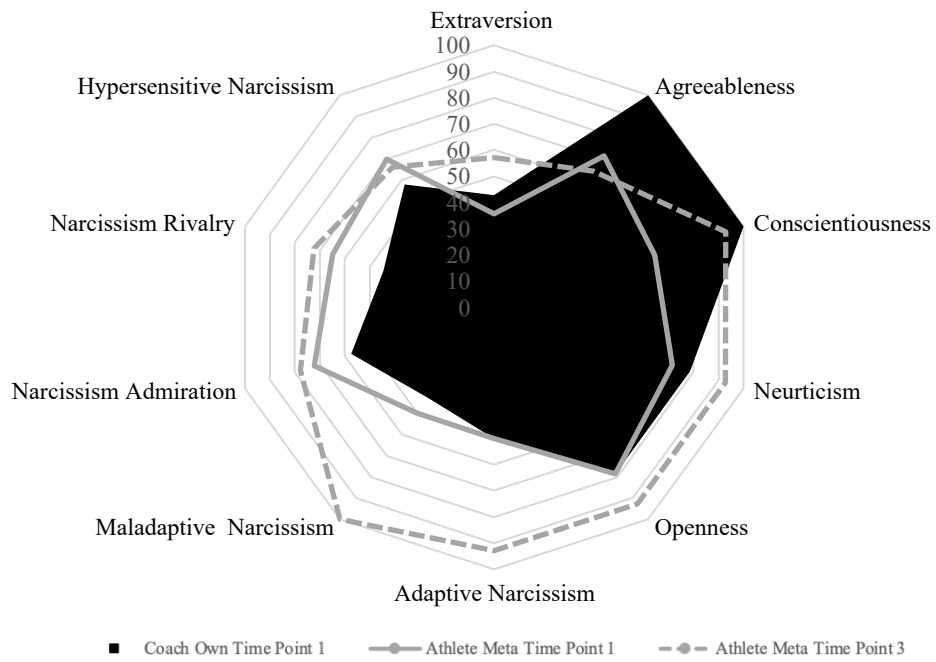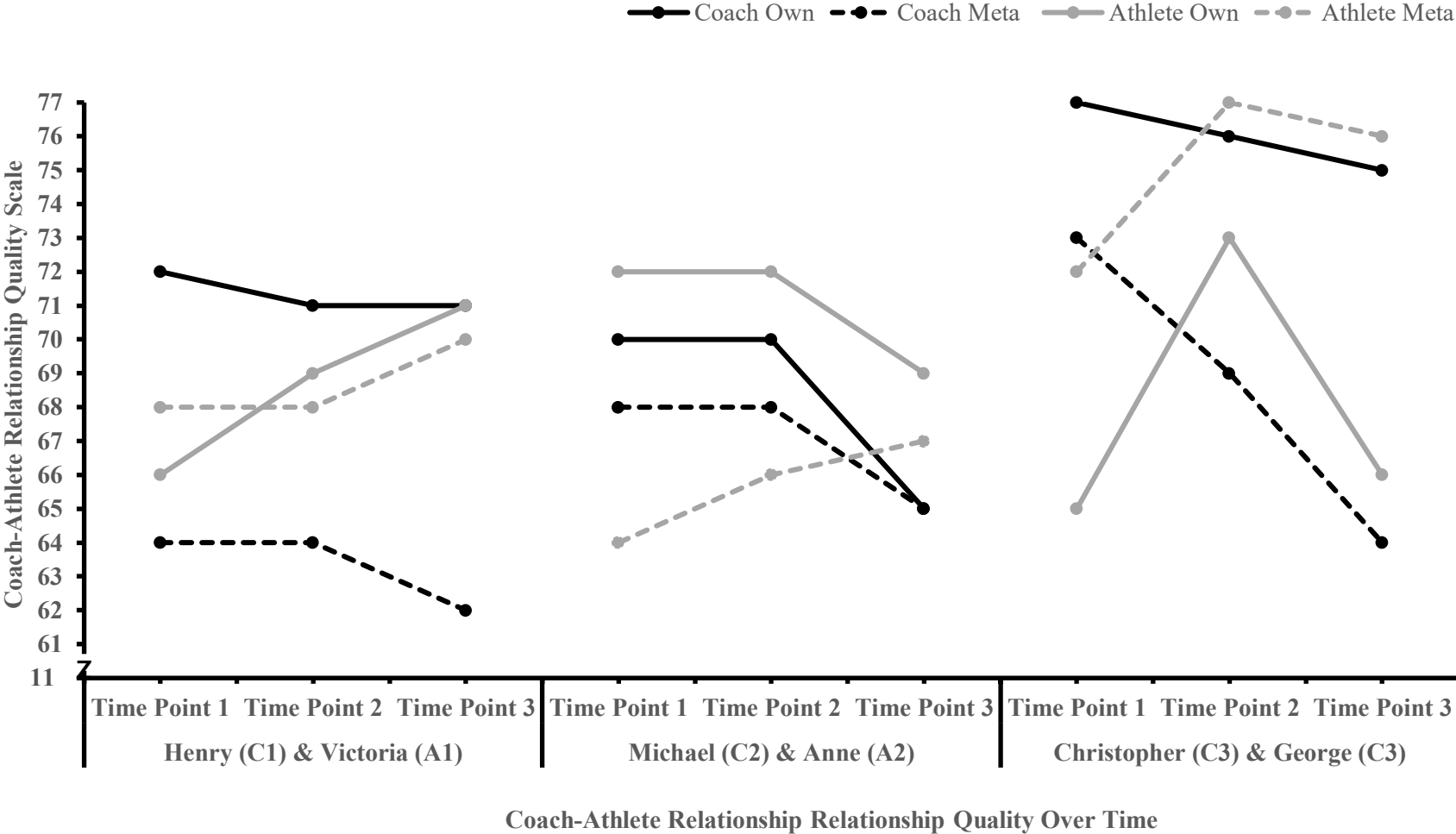| Dyad	Personality & Relationship Assessments on Self	Personality & Relationship Assessments on Partner
Henry (C1)	The data suggest that Henry views his relationship with Victoria as highly positive, with strong thoughts of commitment and closeness. He feels he is ready to coach at his best for this athlete and respond effectively to her. The data also indicate that Henry may be a private person who demonstrates relatively high levels of self-control through their diligent work ethic. Any perceived levels of introversion he most likely manages through using a democratic approach. The data indicates that he is hight in wanting to avoid humiliation and failure, resulting in an underdog mentality. He thrives on positive reinforcement and receiving recognition.	The data suggest that Henry believes his athlete views their relationship as positive. He thinks she views their relationship to have a moderately high level of closeness and cooperative behaviours. This appears to be the same as Victoria's own view of the relationship. Henry also believes his athlete views their relationship to have a moderately lower level of commitment than Victoria does. The data also indicates that Henry appears to view his athlete's personality very similarly to how she views her own. He believes she is marginally higher in her need to have control, power, and influence over others than she views herself. Henry also thinks his athlete is moderately more quarrelsome and less worried about what other people think of her than she thinks of herself.
Victoria (A1)	The data suggest that Victoria views her relationship with Henry as highly positive, with relatively high levels of trust, respect, and closeness. With moderate levels of cooperative behaviours, she may sometimes be slower than others in responding to her coach's needs. The data also indicate that Victoria may be an organised and disciplined individual, with a trusting and warm approach to people. She is not interested in influencing or dominating others but demonstrates moderately high levels of wanting to work hard to be in control of challenging situations. She thrives in seeking out and overcoming difficult environments independently, which enhances her feelings of importance.	The data suggest that Victoria believes her coach views their relationship as positive. She does view it as marginally lower in its quality than her coach own thoughts on the relationship. She thinks he views their relationship to have a moderately high level of commitment. Meaning Victoria may think her coach views their relationship more likely to result in performance success than she does. The data also indicates that Victoria appears to view her coach's personality very similarly to her own. She does however perceive him to want a greater level of power and influence over other people than he does. Also, she views him moderately wanting a greater level of acclaim and admiration from others than he views himself.
Michael (C2)	The data suggest that Michael seems to view his relationship with Anne as positive, with very high feelings of trust, respect, and closeness. Despite moderate to high levels of supportive behaviours, he may not always feel at ease coaching her and at times needs to be quick to respond to her behaviours. The data also indicates that Michael appears to be an outgoing and extraverted individual, who is hardworking, organised and disciplined with a creative, inquisitive nature. He appears to be emotionally stable and demonstrates relatively low levels of irritability and wanting to avoid humiliation. A person that knows his own mind because of a moderate assertive temperament. He feels no need to dominate the people around him. Instead, his confidence and self-assurance allow him to be driven by success.	The data suggest that Michael believes his athlete views their relationship as highly positive. He thinks she views their relationship as having a moderately high level of commitment and closeness. This view appears to be the same as Anne's own view of the relationship. Michael seems to believe his athlete views their relationship to have moderately lower levels of cooperative behaviours then Anne does. The data also indicates that Michael appears to view his athlete's personality very similarly to how the athlete views herself. He believes she seeks more respect from people and has moderately lower levels of self-discipline than she believes she has. However, he does perceive her to possess somewhat higher levels of emotional stability than she does.
Anne (A2)	The data suggest that Anne seems to view her relationship with Michael as highly positive, with very high feelings of respect and closeness. However, with moderate levels of supportive behaviours she may not want to be as friendly as she can be towards her coach. The data also indicates that Anne	The data suggest that Anne believes her coach views their relationship as highly positive. She thinks he views their relationship as having a moderately high level of commitment and cooperative behaviours. This perspective mirrors her coach's own view of the relationship. Anne believes her coach views their relationship to

	appears to be an outgoing and extraverted individual. Her levels of agreeableness mean she may take time to develop a relationship. She could often worry about not being good enough in the eyes of other people, which would make her more determined and driven to prove people wrong. She is not interested in having power, influence or dominating others, instead she focuses her time on demonstrating high levels of discipline and conscientiousness.	have moderately lower feelings of closeness than he actually does. The data also indicate that Anne appears to view her coach's personality very similarly to how he views himself. She does however perceive him to be more quarrelsome and have a greater level of power and influence over other people than he does. She also views him to be moderately more outgoing and extroverted than he views himself.
Christopher (C3)	The data suggest that Christopher seems to view his relationship with George as almost perfect. With relatively high levels of trust, respect, and closeness. Christopher feels very much at ease when coaching George and is always ready to coach him to the best of his ability. The data also indicate that Christopher appears to be an organised and disciplined individual, who is trusting of others. It may be that his reserved nature through relatively high levels of introversion could mean he comes across as emotionally stable and balanced. However, his ability to put others before himself in conjunction with relatively higher tendencies to worry means he may fearlessly protect the people he is coaching, which may result, on occasion, in an all or nothing reactive approach to the situation he is facing.	The data suggest that Christopher believes his athlete views their relationship as extremely positive. He views it as marginally higher in its quality than the athlete. Particularly, thinking it has marginally higher levels of commitment, closeness and a relationship that will lead to performance success. Christopher believes his athlete views their relationship to have moderately high levels of cooperative behaviours. This is aligned to George's own view of the behaviours in their relationship. The data also indicates that Christopher appears to view his athlete's personality to have a marginally higher assertive temperament than George views himself. Specifically, Christopher might believe his athlete wants a greater level of acclaim and admiration from others than he does. Christopher also perceives his athlete to be less likely to worry or be offended than he could be.
George (A3)	The data suggest that George seems to provide relatively high levels of supportive behaviours to his relationship, which allows him to get the most he can out of it. However, he indicated relatively low levels of closeness and appreciation about his coach. The data also indicate that George appears extremely confident in his own ability, making him naturally competitive. His drive to be successful in all areas of his life means he can be unapologetically ruthless in his pursuit of excellence. He is comfortable in dominating the people around him because of a moderately high assertive temperament. His self-focused nature means he knows his own mind. Despite this he seems to be willing to experiment with new ideas if it benefits him in for filling his aspirations.	The data suggest that George believes his coach views their relationship as positive. He does think it is marginally lower in its quality than his coach own thoughts on the relationship. He thinks his coach perceived their relationship to have extremely high levels of trust, respect, and cooperative behaviours. However, George also believes his coach views their relationship to have moderately lower feelings of closeness about the relationship than his coach actually does. The data also indicates that George appears to view his coach's personality to be marginally lower in self-control and discipline than his coach views himself. George could believe his coach feels he is under appreciated by the people around him compared to Christopher's own views. George may also perceive his coach to be moderately higher in a desire to avoid humiliation and a willingness to dismiss others.

Table 5

Intervention Strategies Implemented by Each Dyad

Participants	Strategy	Strategic Focus	Case Detail	Observed Change & Outcome
Henry (C1)	1	Refining communication to reduce pressure	Henry's profile suggested he was a private person, with relatively high self-control and a democratic style. His outcome-driven phrasing initially conflicted with Victoria's independent, disciplined nature, which prevented Victoria from feeling in control. By shifting to concise, athlete-led communication and not always feeling like he had to come up with the solutions, Henry aimed to reduce the pressure on Victoria.	Reduced pressure from the Language used enhanced Victoria's autonomy and confidence. The relationship was protected from strain and strengthened through trust and mutual respect.
	2	Managing nerves through self-awareness	Henry's underdog mentality and desire to avoid failure sometimes led to over-communication when nervous. This risked clashing with Victoria's preference for structure and independence. By simplifying his input and respecting her space, Henry's style aligned with her personality.	A calmer pre-race environment was created. Victoria perceived greater respect, reinforcing mutual trust and composure within the relationship.
	3	Adjusting timing and environment	Henry's reserved nature and preference for composure led him to move conversations away from heightened poolside contexts. This aligned with Victoria's desire for structured, respectful exchanges and her disciplined, independent approach.	Interactions became more constructive and less reactive. The relationship was reinforced by mutual respect and improved problem-solving, resulting in quicker solutions being developed together.
Victoria (A1)	1	Modifying feedback style	Victoria, described as disciplined and conscientious with a trusting, warm approach, sometimes responded slowly to Henry's needs. Given Henry's valuing of recognition, this could cause misalignment. By reframing her input into constructive, positively worded feedback, she adapted to his need for respect.	Communication became more supportive, reducing the risk of defensiveness from Henry. The relationship was protected and strengthened through trust and collaboration.
	2	Self-reflection in pressure situations	Victoria's profile suggested she thrived when independently overcoming challenges and valued control in difficult contexts. Through reflection she clarified her needs and managed her own stress, expressing herself in a structured, composed way towards Henry.	Clearer decision-making and composure supported better working behaviours. The relationship benefitted from greater transparency and stability under pressure and Victoria felt more in control.
	3	Selecting new places to communication	Victoria valued trust and respectful dialogue, preferring to avoid unnecessary confrontation. She deliberately chose calmer contexts to discuss sensitive issues, which aligned with Henry's private style.	By adjusting timing and environment, she reduced tension and felt she could get her point across better to Henry. The relationship was reinforced through openness and respect.

Michael (C2)	1	Reducing antagonistic communication	Michael was described as outgoing, organised, and confident, with relatively low irritability. At times, his flippant remarks risked clashing with Anne's conscientious and disciplined nature, which could heighten her worry about not being good enough. By refining his tone and delivery, Michael adapted to her traits and become less antagonistic to Anne within the relationship.	Misunderstandings were avoided, protecting Anne's confidence. The relationship remained balanced, resulting in more trust and respect.
	2	Becoming less forceful at key high stakes moments	Michael's emotional stability and moderate assertiveness enabled him to remain composed in high-pressure environments. Recognising that forceful communication could undermine Anne's confidence, he worked on damping his forceful communication in at key high stakes moments.	Recognising that moderate assertiveness under high pressure could be perceived as overly forceful, Michael drew on his emotional stability to communicate with clarity and composure, ensuring stability during major competitions with Anne.
	3	Talking in private & changing body positions	Michael's outgoing and confident style was balanced by Anne's conscientious and expressive personality, which could be sensitive to criticism. To reduce tension, Michael adjusted environments (e.g., private discussions, sitting rather than standing).	Interactions became less authoritarian and more collaborative. Anne felt respected, strengthening balance and mutual trust in the relationship.
Anne (A2)	1	Anne did not participate in this strategy		
	2	Anne did not participate in this strategy		
	3	Picking the environment to raise concerns	Anne's extraversion and conscientiousness enabled her to reflect on past exchanges and select calmer contexts (e.g., between sessions) to raise concerns. This reduced the impact of reactive emotions.	Communication became more authentic and less strained. The relationship benefitted from openness and enhanced trust.
Christopher (C3)	1	Refining communication to a more assertive style	Christopher was described as organised, disciplined, and reserved, with a tendency to worry and protect athletes intensely. His longer instructions sometimes conflicted with George's competitive, assertive style, which required clarity. By scripting shorter, precise cues, he adapted to George's needs.	Communication became more efficient and constructive. The relationship was protected from friction and strengthened through trust and mutual confidence.
	2	Keeping composure under pressure	Christopher's reserved, disciplined nature and tendency to worry contrasted with George's confidence and assertiveness. His self-awareness allowed him to maintain composure under pressure, avoiding reactive "all or nothing" responses.	Athletes perceived consistency and stability, which reinforced trust. The relationship benefitted from calm and predictable communication in high-stress environments.
	3	Becoming less formal	Christopher's organised, disciplined profile and reserved style aligned well with George's competitive nature when conversations were held in calmer contexts (e.g., training camps, mealtimes). This avoided reactive poolside exchanges.	Communication became more balanced and collaborative. George felt valued, strengthening the long-term trust and respect within the relationship.

George (A3)	1	Balanced communication cues	George adjusted his communication with Christopher by adopting a more measured and balanced approach. While his reserved nature and tendency to worry could sometimes lead to all-or-nothing reactions, he increasingly prioritised clarity and stability in his interactions. This shift allowed him to protect Christopher's needs while reducing the risk of reactive exchanges during high-pressure moments.	Focus and responsiveness improved, while relational closeness was maintained. The relationship was reinforced through consistent trust in performance contexts.
	2	Using his assertiveness to feel more positive	George's confidence and assertiveness made him highly competitive, but he recognised that his behaviour under stress needed regulation. By reflecting on his traits and using his coach's reinforcement as validation, he used his assertiveness to feel more positive when thing did not go his way at a competition.	Performances stabilised under pressure, while relational trust deepened through mutual commitment and shared focus.
	3	Choosing the right setting to resolve issues	George acknowledged that emotions could linger if left unspoken with Christopher. By addressing this tendency and increasing communication away from the pool during key phases of the season, he created opportunities for more balanced and constructive exchanges	Faster emotional recovery and increased openness strengthened their collaboration. The relationship benefitted from mutual respect and more effective communication.

4.3.1 Descriptive Statistics Results

Henry (C1) and Victoria (A1) experienced a smaller difference in relationship quality over time, with their perceptions becoming more aligned from Time Point 1 to Time Point 3. Specifically, Henry's assessment of their relationship quality slightly declined, while Victoria's (A1) perception improved throughout the study. Interestingly, Henry's (C1) perception of Victoria's (A1) relationship quality became less accurate over time, while Victoria's (A1) perception of Henry's (C1) relationship quality became increasingly accurate at each time point. Additionally, Victoria (A1) showed greater alignment with Henry's (C1) views on his openness and maladaptive narcissism over the course of the study but struggled more with understanding Henry's (C1) perceptions of her narcissistic rivalry tendencies. In contrast, Henry (C1) improved in aligning his views with Victoria's (A1) assessments of her conscientiousness and openness but found it more difficult to accurately perceive her narcissistic tendencies as the study progressed.

Michael (C2) and Anne (A2) maintained a stable relationship quality from Time Point 1 to Time Point 2, with Anne (A2) consistently reporting higher relationship quality than Michael (C2) throughout the study. Over time, Anne's (A2) perception of their relationship quality became more accurate, aligning more closely with Michael's (C2). In contrast, Michael's (C2) perception of the relationship evolved to match Anne's (A2) to some extent, but it never fully aligned with her view of the relationship quality. Anne (A2) showed a stronger ability to accurately perceive Michael's (C2) extraversion and maladaptive narcissism, though she had difficulty identifying other aspects of his personality. Meanwhile, Michael's (C2) accuracy improved at Time Point 3, particularly in recognising Anne's (A2) maladaptive narcissism and her level of conscientiousness.

Christopher (C3) and George (A3) both improved their ability to more accurately align their thoughts with their partners own relationship quality throughout the study. However, Christopher (C3) demonstrated a small decline in his relationship quality and George (A3) relationship quality peaked at Time Point 2. George (A2) struggled to improve

his ability to more accurately identify Christophers (C3) personality traits outside of conscientiousness. On the other hand, Christopher (C3) was more aligned to George's (A2) levels of conscientiousness and maladaptive narcissism over time.

4.3.2 Thematic Analysis Results

4.3.2.1 A Personality to Believe In

The combination of each individual's own and partner's personality led the dyads to believe their relationship would provide success on the world stage. From the lead researcher's observations and interactions, this did not change over time. Christopher (C3), whose personality profile characterised him as having the ability to put others before himself and having relatively higher tendencies to worry signified that he may fearlessly protect the people he is coaching, explains:

> I want him to win so bad and I think he can, he has done in the past - so why would he not now? So, if I say I'm going to do something for him, I'll get it done. That means if I'm working for four hours on a Sunday to get something done for him, I'll do it because I know he will do the same for me…I guess that's just our personalities…but that is where our belief in each other comes from. [Christopher (C3), Time Point 1]

This unwavering belief in each other was confirmed independently within the dyads. For example, in her first interview, Anne (A2) explains how her coach, Michael (C2), always showed her what needed to be improved for her to be successful:

> He was like, you just got touched out there of a medal…It's never that he's not nice, and he's being a knob head. He's just a realist, and he tells me straight, because I believe what he says will make us win together. [Anne (A2), Time Point 1]

The certainty within the dyad that their Partners personality was the right fit for them in each other's personality was not only based on interactions between the dyads, but

founded within institutional and environmental cues, which may be supporting the consistency within the relationship, as supported by the lead researcher's observations:

> When I walk around [training venue name] it is evident by the Olympic Honours Board, the photos of Olympic Medallists on the wall and the amount of people walking round in their country's international kit, you would believe success is inevitable. But when I look closer at the dyads working together, they believe in each other's personality even more. Whilst the environment they work in might support the relationship and looks good, what I feel is most important, and is making these people so successful, is that they have never demonstrated a shadow of doubt to each other or myself that they are not going to accomplish what they have set out to do, it's pretty inspirational. [Lead researchers reflection video]

This belief in each other's personality did not change throughout the course of eight months even when conflict in the relationship was present and performance outcomes fluctuated:

> It's definitely been the most up and down year for results… We have definitely bumped heads a couple of times, I felt like the conversation we had in [major competition venue] was very honest, and pretty rough. But that never stopped me believing we were going to succeed together [Victoria – A2, Time Point 3].

Relationship quality reduced for all participants apart from Victoria (A1), see Figure 5, after competing at the World Championships. Yet, this belief in each other's personality still was present. At Time Point 3 George, (A3) explained why he still believed that Christopher (C3) had the correct personality for him despite their reduction in relationship quality: "We both understand the kind of results and performances we wanted. I just think if

I don't perform, what's wrong with our relationship? But I can get over that because I trust in his personality".

4.3.2.1.1 Strategies: A Personality to Believe In. All three strategies supported this theme to a degree. Participants adjusting their communication to align with each other's personality profile allowed both coaches and athletes to have a new interpersonal strategy which enabled them to verbally communicate this belief to each other. For example, Michael (C2) explains:

> So, one flippant line from me can create quite a lot of damage to Anne's belief
> in us. She can quite easily show me: I can quite easily see the elation in her
> eyes, and I can quite easily see the venom when I say something wrong. So,
> thinking about what her personality is and what you are going to say before
> you say it, in the heat of the moment, is definitely useful. I don't want her to
> hear something from me and not think I am fully on board [Michael (C2),
> Time Point 3].

Strengthening the relationship at competitions via intrapersonal awareness, Strategy 2, provided Christopher (C3) a greater level of equanimity under stress, allowing him to present more of himself to the relationship. He explains:

> It allowed me to be calm in a competition situation. I see coaches, even at
> World's and Olympics, they just change. Whether that's change and they
> become really quiet and withdrawn, or change, and you can just visibly see
> they're nervous, and they start over coaching. So, this approach allowed me to
> be pretty level. I didn't get too excited, I didn't get too nervous, I could just be
> me. [Christopher (C3), Time Point 3].

This new ability to be more like himself in the competition environment allowed George (A3), whose own relationship quality was lowered between Time Point 2 and 3, to continue to believe in their relationship and move past poor performances. George (A3) said

at Time Point 3, "The more he's giving of himself to me, the more we can get over it together."

Finally, the identification of the situational factors each individual brings via their personalities, Strategy 3, supported a greater understanding of how, within the dyad, personality can be positively utilised. Victoria (A1) explains how talking to Henry (C1) away from the poolside allowed her to use his democratic personality characteristics so that she could better understand how he would like to operate without damaging any belief in their relationship. She stated:

> I'd more openly speak to him, like what I like and dislike in our relationship away from the pool. I know when we butt heads, but he's never told me, like he wants me to act a different way. Like you know when we had a conversation about me questioning you, it's not me saying I don't believe in you. At the pool, he never asks me or gives me specific examples for how he wants me to communicate with me in those situations. So, when we talk over coffee, I think we both are more aware, we can create examples on what we want and don't want in our relationship. [Victoria (A1), Time Point 3]

4.3.2.2 Exposed Behind Closed Doors

Although dyads believed, via their individual personalities, that they could achieve their goals together, a high level of masked vulnerability was present, which was often camouflaged by a positive exterior. This undercurrent of vulnerability often stemmed from a need to be successful. The lead researcher initially became aware of this within his first few interactions with the coaches. For Henry (C1), it was heightened when discussing the meta-relationship profiles, as he felt Victoria (A1) thought their relationship quality was higher than she did. In his first interview he stated:

> Like what I don't want from this is to be all of a sudden second guessing my relationship with Victoria. I guess my default now is to look at that and be

like, oh sh*t, it's not as good as I thought it was. Like, is there something wrong there? Or like I don't want there to be that element of doubt that we can't do it, you know? She trains and competes at such a high level. [Henry (C3), Time Point 1]

Anne's (A2) personality profile identified that she might often worry about not being good enough in the eyes of other people. Therefore, Michael (C2) could recognise that he had to balance her underlying vulnerability whilst also trying to train her to the level where she could win an Olympic medal. He stated:

There's a vulnerable streak in Anne that needs to be looked after and it's a balance. One of the things that she's said this year to me was stop pussyfooting around me at training. You're my coach, I need you to be strong if we are going to win. But I know if I did that, she could not handle it, so I do have to handle that vulnerable streak, just to let her know that I'm, from an emotional sense, still connected in that way. [Michael (C2), Time Point 1]

This was also acknowledged by Anne (A2) at Time Point 2, when she was interviewed alongside Michael (C2):

I'm not scared to burst into tears in front of Michael, and he's not afraid to get emotional in front of me. I just think it makes us very honest in training and what is and what is not good enough. I need him to push me in training, that is what I want. So, if I do come to him crying, he'll know it's not just because I'm being a fanny. We've both seen each other at our best and our worst and we know how far we can both go. But I think Michael can be more wary of that than me. [Anne (A2), Time Point 2]

The lead researcher observed this change over time become more frequent in Henry (C1) and Victoria (A1), and Michael (C2) and Anne (C2)'s relationships:

There's often a real sense of a nervous undercurrent within some of the relationships, like a nervous energy, that could explode when things are not going the way they were hoping. Henry seems to be flustered when Victoria did small things he disagreed with, like not recovering in a specific way. But if you look on Instagram, you will think everything is just fine. He keeps then being fixated on them and not letting it go with her. Michael and Anne are walking this emotional line where any interaction could turn into a war. It never has but the potential seems there, but then it can just go back to being all okay within the next interaction. It is like relationship sparring that they are worried is going to be exposed. This rumbling of this seems to be getting more frequent the closer we are getting towards the World Championships. [Lead researchers reflection video.]

This observation was supported by Henry (C1) who acknowledged this can be a common occurrence within high-performance relationships.

So, although we can be really friendly and giggly and that, it's like a dormant volcano, it's like, when is the chaos going to erupt? And when it does, it's often one to one, it's often having to be managed one to one, but it's always been how our relationship is. [Henry (C1), Time Point 3]

4.3.2.2.1 Strategies: Exposed Behind Closed Doors. Strategies 1 & 2 seemed to support this theme to a high degree. Henry (C1) felt like he became better at adjusting their communication over time, and the better he became, the more positively it impacted on Victoria (A1) in training. He concludes:

I think over time, you realise and figure how you should say it and how you should not say it, what strikes an emotion in a positive way to get something out of the set, what would strike it in a negative way, so you don't say it. But it does take practice. [Henry (C1), Time Point 3]

In addition, the coaches felt this strategy provided stability to their relationship whilst simultaneously providing additional support to the athletes during challenging training. Michael (C2) explained:

So, it allows me to speak in a way that our personality's to kind of mesh into something that is good for long term sustainable success. But also, it gets our relationships to a point where it's controlled enough that high-performance is actually achievable, you know like I can help them more to actually get through the training programme. [Michael (C2), Time Point 3]

Strengthening the relationship at competitions via intrapersonal awareness, Strategy 2, allowed the athletes to focus on themselves, which would then support a reciprocated positive relationship as the coaches could see them being the best version of themselves under high competition stress. George (A3) explains:

I think at Worlds it did really work, because it is such a pressure environment which, like, is what I need. It's like this time I didn't get excited or nervous. At Worlds I can just be me and that really can help our relationship because my coaches can see I am ready to go. [George (A3), Time Point 3]

This change in approach during a major Championship was acknowledged by Christopher (C3), who noticed a positive change in George (A3) when reflecting on their relationship post World Championships:

Yeah, so I would say it's become more positive through the year in the competition environment. We know his personality is naturally competitive and he is unapologetically ruthless. And I just saw him before races be the person he is. The person I see every day in [Training Venue]. [Christopher (C3), Time Point 3]

4.3.2.3 In Power, No Power, Or A Fight for Power

At different times throughout the season, both the coaches and athletes either held the authority, had no authority, or desired authority over their dyadic partner. This fluctuation in relationship dynamics was not bound by roles and would often change quickly within the session but could also change slowly over the season. An individual's personality initially set the dynamics of the relationship. For instance, Victoria's (A1) personality profile described her as wanting to work hard to be in control of challenging situations, allowing her to easily dominate Henry (C1), whose personality profile described him as being most likely to use a democratic approach when working with athletes. Victoria (A1) explains how this impacts their relationship:

> I know he wants me to do this and this, but I'm not as convinced as he is. I think the biggest disagreement is when I question something, I ask a lot of questions, and I don't give Henry the answer he always wants. He wants from me that he's doing it right. I'm not giving that if I'm not convinced because I don't think Henry is the only coach in the world that can help me win an Olympic medal. [Victoria (A1), Time Point 1]

An individual's personality facilitates the transition of authority in the relationship. In front of Anne (A2), Michael (C2) would often demonstrate his frustration when he was not in power, feeling the natural power dynamic should reside with him as the coach. He states:

> If there's a bit of talking or what-not, I'm like, I have not got a hold of the session. My reaction then is to try and very quickly get it back with a, get on with it. Even in the most collaborative circumstances, my job is still to keep some kind of control and direction over where we're going. [Michael (C2), Time Point 2]

Victoria's (A1) meta perspective of Henry's (C1) personality showed him to want a greater level of power and influence over other people than he thinks of himself as wanting.

She acknowledges this in front of him at Time Point 2: "I feel like you want to take the power. We as swimmers, we see you wanting more power over us." This would often result in the dyads falling into a power struggle they were unaware of. The lead researcher observed:

> My assumption would be that the coach would always have the authority in the dyad, but now I can see the personality sets the initial dynamic. Then over time, as their relationship develops, the authority seems to shift back and forth often depending on how the athlete was performing. For example, if performance is high the dynamic did not seem to change. However, if the level of performance dropped, it would start to shift the dynamic. It is like subconsciously the relationship is saying we have to change this in order to get what we both want. I have seen it change in the space of a meeting, Victoria just saying I am not going to do that, or I am starting to see small but more frequent defiance to the other person's authority. Today Anne was clearly demonstrating to Michael a desire to change who was in control, by saying to him she was going out tonight. Although framed as a joke, it felt like there was an element of her saying, 'hey I have the authority here now'. [Lead researcher - reflection video].

What seem to prevent the dyads falling into this ongoing back-and-forth power struggle was for both members to be accepting of where the power was in the relationship at any given time. George (A3) enjoyed being in control: "I feel like, I like being in control, I love knowing what I'm doing, having everything planned out for me" [Time Point 2]. Although he had the authority at the time, he would share any success he had with Christopher (C3). This had a big impact on how Christopher (C3) viewed the relationship:

> It's like when things go really well, he shares that with me, and that motivates me more to be better for him. So, that's the big difference on how we work together. We both are accepting of how we need to work together and the

dynamic we have. We click in terms of us knowing how each other works, ultimately, it's his swimming and he's in charge. [Christopher (C3), Time Point 3]

4.3.2.3.1 Strategies: In Power, No Power, Or A Fight for Power. Creating a different situation to reinforce positive elements of people's personality in the relationship, Strategy 3, had the biggest impact on the dyad's relationships. Changing the environment seemed to support a smoother transfer of authority. Michael (C2) explains:

Well like you know, I was definitely moved from a more, I suppose, authoritarian approach, where it's like, no: this is what you need to do, to environments what allowed more questioning and discussion. So, it's much better that I don't do that, and go to a different space where I can deliver that what needs to improve, or what wasn't good enough, in a better way. And then the coach-athlete relationship stays intact, in a good way rather than, you know, battling each other. Talking to her away from the pool, it's just a natural evolvement of our relationship, to give more control, discussion, and decision making to the athlete. [Michael (C2), Time Point 3.]

From the athlete's viewpoint utilising different environments enabled them to demonstrate a positive element of their personality to move the relationship dynamic within the relationship to a place where they were both comfortable. For example, Victoria (A1) employed her trusting and warm approach towards her coach who, at the time, felt he had the authority withing the dyad. She said:

I think the different situation has forced us to be even more honest and open with each other, and I can show my trusting side to him. I have been more open and honest with him, because I obviously have been carrying this unhappiness of how we were working for about six months before he was even aware that it was a problem. Changing the situation allowed me to say

what I wanted to say to him in a way that was true to myself. [Victoria (A1), Time Point 3]

The lead researcher commented after a session on how Michael (C2) used this approach very well to control his own frustrations with Anne's (A1) fight for authority.

I'm starting to notice that when Anne digs at Michael, rather than using his assertive temperament to fire back, he makes subtle adjustments with his body, such as standing next to her instead of in front of her or sitting down instead of towering over her. I think he is doing this, so he does not come across combative and allows him to start to get out of this back-and-forth power struggle. [Lead researcher - reflection video.]

4.3.2.4 Close Or Too Close?

The interactions between the dyads' personalities clearly produced higher relationship quality (see Figure 5). However, this often resulted in the relationships becoming too close, which hindered performance decision making. This seemed to change and fluctuate over the course of the study. The coaches were almost conscious of this at the very start of the study:

I think I've got a good relationship with Anne, from a coach to athlete perspective, but also just a person-to-person perspective. Probably if we weren't in swimming, we'd be friends. So, I suppose that's something I have got to try and be a little bit mindful of, because the relationship is coach to athlete. From a performance perspective if you enter the friend zone, it's dangerous, very dangerous. If you can't come back to the coaching zone, you're going to get into a sticky situation. In the friend zone, you lose your ability to control the direction towards high-performance. [Michael (C2), Time Point 1]

At Time Point 2, Henry (C1), whose relationship profile stated he had strong thoughts of commitment and closeness, describes, in front of Victoria (A1), the consequences he felt would happen to him if they got overly close:

> I think when I don't get the results, when you're close with someone, or have that good relationship, the automatic thing is to feel it more emotionally. Somebody you might not have as good relationship with, I don't necessarily lose hours of sleep over them. Whereas, if it's, a good relationship, you question yourself more, could I have done this better? Because I know how much it means, and how much the sacrifices are. [Henry (C1), Time Point 2.]

Individuals in the dyads felt able to show to each other all elements of their personality when performance levels were aligned with each other's (i.e., the better the performance the closer the relationship). When performance was low, individuals retreated and did not exhibit all elements of their personality. The coaches were implicit in teaching their athletes this. Anne (A2) explains:

> He tells me to be emotionless. So, he knows to be wary, but he knows like, he just does drill it into me, like be emotionless, be emotionless. I'm ever so good at over thinking… So, like I think when he says be emotionless, I do listen to what he says, and I do try and do everything he says because I know what he's saying is the right thing to do for our relationship [Anne (A2), Time Point 3]

For Victoria (A1), feelings of closeness seemed to widen as the relationship and level of performance appeared to be becoming more turbulent:

> Our distance changed with each other. Like in the beginning of the season, we spoke a lot about how we're feeling, treated by others, and how we interact and stuff. And then the middle part where I felt like we almost took a distance from each other, because we didn't know how to approach each other because we were both stressed and upset and annoyed. And my swimming didn't go

as I wanted it to, and I got injured. You know, like all these little nudges, they

kind of just separated us. [Victoria (A1), Time Point 3]

Whereas, for George, (A3) his level of closeness intensified the closer the World

Championship became:

I feel like we were more distant at the beginning in January. I'm not sure why,

maybe the World Championships were so far away. Then I feel like it was

very intense towards the end. I think it started picking up in like April/May

where we started specifically talking about certain things about races. [George

(A3), Time Point 3]

4.3.2.4.1 Strategies: Close or Too Close? All three strategies supported this theme to

a degree. Participants adjusting their communication to align with each other's personality

profile allowed both coaches and athletes to control their relationship by increasing or

decreasing the level of closeness they shared. Michael (C2) explains:

I do need to think about it, so it doesn't cause that emotional response. She

will just grab onto the word because she's an intelligent girl, and then she goes,

oh so you think our relationship should be like this. So, I do find it hard,

because I'm constantly thinking what Anne is like, one, I don't want to upset

her, two, I don't want her to hear something, okay, and to drive the

relationship away. [Michael (C2), Time Point 3]

Strengthening the relationship at competitions via intrapersonal awareness, Strategy

two, provided Henry (C1) with an advantage in their relationship as he could uses his

introverted nature, highlighted in his personality profile, to be comfortable during silent

moments which occurred within the high stress competition environment. He explains:

I guess it's weird because where we were, it's like, I'd say, a good two-minute

walk to the call room from the prep area. And it's like you're walking and I'm

like, oh right, well I don't want to talk about the race here, because she doesn't

want me to. Right let's make some stupid dad jokes or, like just you know, try and talk about something different, because you naturally know they're anxious and you know they're focused on the racing. You're trying to fill that awkward two-minute gap with just anything, but I think that was often making it worse. So, I just used my personality and my introversion to be comfortable in the silence together. [Henry (C1), Time Point 3]

Identifying situational factors that each individual will bring via their personalities, Strategy 3, impacted Anne's (A2) perception of Michael's (C2) thoughts on the relationship, to become aligned with her own. She used this strategy to show Michael (C2) the determined and driven elements of her personality to connect with him and ensure he was prescribing the training she wanted:

I sat him down and told everything. I think he was like, okay, like she's serious about this, like she wants this. Rather than me just saying, oh please push me hard, like I if I just made a comment at the pool, I think he'd still be like wary. But since I've like sat him down and said it, he was like: okay this is what she wants. If she then comes back in a few weeks in a mard and saying it's too hard, like we have that meeting to reflect on how it is going. [Anne (A2), Time Point 3]

4.3.2.5 *Work with Me*

The final theme demonstrates that when coaches and athletes understand how to use each other's personalities in a positive way, relationship quality seems to be more stable over time. From the lead researcher's observations and interactions, Christopher (C3) and George (A3) seemed to do this effortlessly throughout the whole season. The lead researcher reflected on the relationship:

It is wonderful to watch Christopher and George work together. George is obviously an exceptional swimmer and clearly very self-focused and quietly

confident in his own ability to win an Olympic medal. But Christopher seems to use this to create a relationship that they are both comfortable with; there's no shouting or screaming, hooting, or hollowing. When George produces some world-class training, there is no "did you see what he just did?" or "that's it, that's the winning rep," there's just a heart-warming nod, a well done- and a "thanks coach" in reply. They both seem to get so much out of each other's personality. It seems to allow their relationship to always remain calm. [Lead researcher - reflection video].

Christopher (C3) explains how this worked in front of George (A3) at Time Point 2:

Again, this is where I would rank my enjoyment of coaching you really high, and our relationship, is that I never have to try to motivate you or persuade you to do something hard. Because again, it's written in here in your personality profile, that drive you've got, to be successful yourself, means that if I just sort of point you in the right direction, off we go, you know. That sort of relates to me, in terms of my coaching style. I'm not someone that stands on poolside shouting and ranting and raving and trying to, you know, cajole people into doing their best. You're driven to do that naturally. So, I just use that, and it's going to be successful. [Christopher (C3), Time Point 2.]

This approach was adopted less by the other dyads during the initial period of the study (i.e., from Time Point 1 to Time Point 2), which appeared to result in a less harmonious relationship. For example, Victoria (A1), whose personality profile characterised her as thriving in environments where she could seek out and overcome difficult situations independently, struggled with Henry's (C1) approach in the competition environment:

Before a race, I always had coaches that just gave me a fist bump and said, go hard, go home faster. So that's what I was used to, and then coming to a coach

that wants to sit and talk for five minutes, it was just too big of a change for

me. It stresses me out in the way he talks to me, leading up to bigger meets

and stuff. Because the way he speaks to me, like isn't working, and I have had

to tell him being like, dude, like you can't talk to me that much before a meet,

like before a race. Like when you talk to me that much, I start over thinking it,

it stresses me out. [Victoria (A1), Time Point 1]

Whereas, for Anne (A2), whose personality profile characterised her as an outgoing and extroverted individual, it was the training environment that presented the biggest challenge for her relationship:

I think sometimes, because I'm outgoing and extroverted, that makes us butt

heads, because I am happiest when I am around people. Because obviously, I

like to be sociable. And like this year, now I have committed to it, I am

struggling, not being able to go down to London to see my friends and stuff.

So, I feel like my social life makes us to continue to butt heads. [Anne (A2),

Time Point 1]

These small frequent clashes of personality seemed to be a constant for both of these dyads until the peer support phase started at Time Point 2 -3. The lead researcher reflected on these relationships:

It appears that the main source of tension within these relationships is when

coaches and athletes ask of each other something that is against their natural

temperament. It's the classic situation of asking the conscientious person to

relax or the ambitious person to set small achievable goals. What is interesting

is how this plays out on the poolside. What seems to be happening is the dyads

seem to be working well together but as soon as someone is asking their

partner to be something they are not; it becomes an immediate roadblock in

the relationship. I do think the coaches and athletes are very good at quickly

working around this together, but there seem to be short sharp reminders of –

'hey that's not how I work!' [Lead researcher - reflection video].

4.3.2.5.1 Strategies: Work With Me. It was Strategy 1 which had the biggest impact on the dyad's relationships. Participants adjusting their communication to align with each other's personality profile allowed for coaches and athletes to work more cohesively with each other's personality. George (A3), whose personality profile described him as being driven to be successful in all areas of his life, meaning he can be unapologetically ruthless in his pursuit of excellence, explains how when Christopher (C3) often chose not to communicate with him, he aligned more with his personality, and this impacted his view of the relationship:

> He knows he does not need to talk to me much during the set, because I
>
> know when it's well, I know it. Like I know already what I have to swim,
>
> and what I need to do. So, he knows I will know. He is not the one who
>
> needs to keep telling me, hey this is good because he's aware that I know this
>
> is good. So, it's yeah, I think that's, it's probably the interesting aspect of the
>
> relationship, that he is aware of what I am, thinking in that sense. [George
>
> (A3), Time Point 3]

Interestingly, both Christopher (C3) and George's (A3) perceptions of each other's own relationship quality became more aligned over the course of the study. However, this strategy often took time to develop. For example, at Time Point 3, Victoria (A1) states:

> I think Henry is also a sensitive, like a very sensitive person. Before, when
>
> we worked together, my comments definitely did hurt him. I used to see it
>
> like, there's no other way of getting it across to him. But now I think I am
>
> able to say what I want. It's almost like I can positively criticize him now,
>
> but like criticize him with positive wording, or a positive manner. [Victoria
>
> (A1), Time Point 3]

This, again, resulted in her perceptions of the relationship quality becoming more aligned with Henry's (C1). In addition, using this strategy allowed Victoria (A1) to clearly communicate with him. She had previously identified this as a challenge in/to the relationship.

At Time Point 3, Henry (C1) stated: "All I did was, 'hey good luck, go get it, fist pump, see you later'. And then it's like yeah, it's a weird one, but I respect you, you know that that's what she wants." These new complementary behaviours from Henry (C1) might have also resulted in Victoria's (A1) overall relationship quality improving from Time Point 1 to 3.

4.4 Discussion

Through utilising a mixed method methodology, underpinned by critical realism (Ryba et al., 2020; Onwuegbuzie & Leech, 2005), this study investigated how coaches' and athletes' personalities impacted their relationship over the course of a season. Additionally, peer support was provided to both elite coaches and athletes that addresses the intra, interpersonal and situational effects of their own and partners personality on their coach-athlete relationship. Through engaging in reflexive thematic analysis, five themes were generated: A person to believe in, exposed behind closed doors, in power, no power, or a fight for power, close or too close and work with me. Our quantitative, qualitative, and observational findings have equally contributed to the mixed method design adopted in order to generate our findings. This was made possible through using a critical realism approach to triangulate multiple data sources (Jagosh, 2020).

Both coaches and athletes felt that their partner's personality led them to believe their relationship would provide success on the world stage. Several authors have identified how personality traits can impact the quality of the coach-athlete relationship (Baudin et al., 2011; Jackson et al., 2011; Yang et al., 2015). However, this study demonstrated that personality traits contribute to coaches' and athletes' belief systems of their relationship in turn impacting the quality of their relationship. Jackson et al., (2010) demonstrated that a

high degree of confidence in the other person's capabilities predicted greater levels of commitment to their relationship for both coaches and athletes, which in turn can impact their performance. Therefore, it is important that coaches' and athletes' personalities are used to positively contribute to each other's beliefs in their collective ability. Previous research has shown that enhanced communication can increase relationship effectiveness (Coulter et al., 2016; McAdams, 2013). This supports our findings via the peer support phase, that focusing on helping coaches' and athletes' intra, interpersonal and situational factors allowed for the dyad to utilise each other's personalities in order to sustain belief to a better degree. This provided a greater level of comfortability under the stress of high-performance environments whilst maintaining authenticity to their individual personality.

Whilst these dyads performed at a high level, they all exhibited a level of vulnerability towards each other. This was often centred around if they, their partner or their performances were going to be good enough at the up-and-coming World Championships. González-Hernádez et al. (2020) found that individuals' who had higher levels of narcissism, which was one of the measurements used to create the personality profiles, had a stronger desire to win and a greater fear of losing. In addition, outside of sport, Diller et al. (2021) found that when business coaches worked with client's who had higher than their own level of narcissism, they became more anxious and distressed when working with them, leading to less coaching success. Our study demonstrates that both coaches and athletes in high-performance relationships have to constantly manage each other's vulnerability element of narcissism instead of the often reported socially insensitive, selfish, hostile, and aggressive behaviours linked to narcissism in relationships (Wurst et al., 2017). Supporting coaches and athletes on enhancing their own intra and interpersonal communications in accordance with their individual personalities seemed to support coaches and athletes managing each other's level of vulnerability and provided stability to their relationship over the course of the season. These findings build on previous research by demonstrating that coaches and athletes should focus on the effects of their communication via their personality

to maintain a positive coach-athlete relationship and not wait for conflict to happened before trying to resolve it (Rhind & Jowett, 2010), ensuring high-performance relationships will not fall into negative feedback loops.

Throughout the season, the authority dynamics between coaches and athletes fluctuated, influenced by individual personalities and capable of changing rapidly within a session or more gradually over time. While the misuse of power in coach-athlete relationships is well-documented and can lead to severe negative interpersonal outcomes (Wachsmuth et al., 2017), this study did not observe such misuse. Instead, both coaches and athletes used their personalities to influence how much authority they needed at that time and shape their interactions, working towards their desired performance outcomes together. The dyads' ability to change the balance of power, where no single individual held all the authority, potentially served as a protective factor against power misuse, which has been reported to be more prevalent when a male coach works with a female athlete (Tomlinson et al., 1997). This study highlighted that a coach-athlete relationship where both parties can exert authority contributes equally to its effectiveness, aligning with a coach-athlete centred approach (Jowett & Slade, 2021) Therefore, it should be encouraged that changes in power dynamics within the relationship can maximise both parties' effectiveness. Strategy 3, which supported the greatest shift in power dynamics, had the most significant impact on the relationship. This may be because changing the broader social context within which coach-athlete dyads operate influences the personal characteristics each brings to the relationship (Simpson et al., 2015), potentially allowing individuals to optimise aspects of their personality without being constrained by traditional coach-athlete relationship dynamics (Burke, 2001).

The study demonstrated that while the dyads generally maintained higher relationship quality, this quality could fluctuate throughout the season, often linked to the athlete's current performance. Our findings align with previous research suggesting that the coach's effect on the relationship should be prioritised before trying evaluating performance

outcomes (Zhao & Jowett, 2023). Consequently, both coaches and athletes were mindful of maintaining clear boundaries to avoid the relationship becoming overly close. Drewe (2002) noted that the intense public context and the significant time coaches and athletes spend together naturally lead to the development of close relationships. They also emphasised that problematic elements in these relationships can arise if poor performances are not managed properly. Supporting our findings, effective management of performance issues and awareness of each other's personalities are crucial for optimising training and competition (Jowett & Meek, 2000). Interestingly, the proposed strategies allowed both coaches and athletes to adjust the level of closeness in their relationship, facilitating better alignment in their individual and collective decision-making.

Finally, our findings demonstrated that each participant had their own unique personality which influenced their own view of their relationship and their partner. This highlight that high-performance coaches and athletes' personalities and relationships are all different. The effectiveness of their relationship was how well they worked with each other personalities. Our findings are in support of Roberts et al. (2015) who recommends working with (rather than against) an individual's personality characteristics, with a specific opportunity to ensure they can use their most dominant personality trait to maximise relationship effectiveness. In addition, our findings further support the work done by Ferra et al. (2018) as Strategy 1 (i.e., tailoring communication styles) had the biggest impact on the dyad's relationship. Therefore, it may be easier for coaches and athletes to work with each other's personality if they develop the skills of customising communication, considering aspects such as content, language, tone, and delivery to suit a partner's personality. In addition, enhancing coaches' and athletes' interpersonal communication strategies that were tailored to an individual's personality seem to enhance a better coach-athlete relationship.

4.4.1 Practical Implications

The current study has highlighted many practical implications. Coach, athletes, and sports psychologists should continue to utilise personality assessment, but in conjunction

with how this impacts individuals' own thoughts and feelings of their relationship, the thoughts and feeling of their partners, and how this affects the situation they are working in. Additionally, high-performance dyads are comprised of a range of personalities, and it was the coaches and athletes' ability to work with these personalities that made that relationship so effective. This study demonstrates that high-performance environments require coaches and athlete to foster higher relationship quality together. But high-performance relationships, like all relationships, can result in conflict which seemed to be small but frequent due to the difficult tasks they are trying to achieve but is often resolved quickly by working with each other's personalities to navigate these situations. Therefore, conflict resolution should be prioritised potentially through utilising third party (Wachsmuth & Jowett, 2020). Nevertheless, the quality of the relationships seems to be linked to how an athlete is currently performing (i.e., when performance is perceived to be higher relationship quality is also high). As such, greater emphasis should be placed on using the strategies employed in this study to enhance relationship qualities when performance levels are not meeting expectation before addressing any other areas.

4.4.2 Strengths, Limitations, and Future Directions

This study is the first of its kind to investigate the role of personality in the coach-athlete relationship in a high-performance environment over the course of a season. The longitudinal approach utilised mixed methods, which included a meta-perspective from both members of the dyad, allowing them to view each other's personalities and relationships. This facilitated the triangulation of data sources, minimising the effects of relying solely on self-reported measures, although response bias may still have been present to some degree (Colbert et al., 2012). Additionally, while it is recommended to use a single sport to generate sport-specific results (Hodgson et al., 2017), it is difficult to determine to what extent each theme was present across all dyads, and at what point it most strongly supported which element of relationship quality (i.e., closeness, commitment and complementarity) throughout the season. Moreover, the degree to which the strategies helped each individual

and each context remains unknown. Future research should focus on determining which (i.e., intrapersonal, interpersonal, or situational effects on personality) is most effective in enhancing the coach-athlete relationship and how this can be incorporated into larger sample sizes such as team sports or additional key members such as sports psychologists, performance directors, assistant coaches.

4.5 Conclusion

This study sought to understand how coaches' and athletes' personalities impacted their relationship over the course of a season and to provide additional peer support to both elite coaches and athletes that addresses the intra, interpersonal and situational effects of their own and partners personality on their coach-athlete relationship. This is the first study that has used a longitudinal mixed methods approach with a critical realism paradigm. In doing our analysis has generated five themes (A person to believe in, exposed behind closed doors, in power, no power, or a fight for power, close or too close and work with me). The findings of this empirical investigation have provided an original and significant contribution to the coach-athlete relationship literature by providing a unique insight into how both high-performance dyads personalities result in a successful relationship over the course of a season.

CHAPTER 5: GENERAL DISCUSSION

This thesis aimed to address a number of gaps in the current personality and coach-athlete relationship literature. In particular, the role of the personality traits of narcissism, psychopathy, and Machiavellianism was examined in relation to coach-athlete relationships. This is highly pertinent as although theorised as potentially relevant to the environment of sport, these traits may present challenges within interpersonal relationships. This theoretical assumption was untested in the context of the coach-athlete relationship prior to this thesis. Additionally, personality research has predominately been investigated through employing self-reported quantitative methodologies, without the incorporation of other methodological approaches (i.e., qualitative investigation, mixed method design) which could lead to novel insights. As such, through employing a range of methodologies, the research presented contributes and extends existing knowledge in the field. Furthermore, the way in which coaches and athletes can effectively work together by harnessing elements of their respective personality traits was examined. Therefore, this thesis provides a platform for recommendations and guidance for coaches, athletes, and governing bodies on how to support effective coach-athlete relationships. The broad aims of this thesis led us to examine four primary objectives:

1. To explore the effects of alternative personality traits (i.e., narcissism, psychopathy, and Machiavellianism) in the coach-athlete relationship.

2. To examine how coaches and athletes understand each other's personality traits and how this impacts coach-athlete relationships.

3. To expand current approaches to personality research by utilising a mixture of methodological approaches.

4. To provide recommendations and guidance for coaches, athletes, and governing bodies on how to support an effective coach-athlete relationship.

The effects of alternative personality traits in the coach-athlete relationship were explored in Chapters 2, 3 and 4. Chapter 2, focussing on the Dark Triad (i.e., narcissism, psychopathy, and Machiavellianism) by examining how coaches and athlete's levels of these

traits, as well as the similarity in these traits, relate to the quality of their coach-athlete relationship. By utilising the Actor-Partner Independence Model (Cook & Kenny 2005), an exploration of the impact of these traits on the quality of the coach-athlete relationship, and the extent to which coaches and athletes are similar on these traits, was undertaken. In Chapter 3, a more focused approach, specifically the role of narcissism and its effects on similarity on coaches, was adopted. A purposeful sampling strategy, based on the data presented in Chapter 2, was employed to deepen the understanding of how coaches' intrapersonal thoughts and feelings influence their own perceptions and experience of their coach-athlete relationship. This chapter employed the critical realism approach to thematic analysis outlined by Wiltshire and Ronkainen (2021). This methodological framework has provided valuable insights and key lessons, particularly in its application of the theme types, empirical, inferential, and dispositional, and their associated validity indicators. In addition, this methodology allowed for the combination of qualitative and quantitative approaches which enabled the formulation of potential recommendations. In the final empirical chapter (Chapter 4), in high-performance settings, coaches' and athletes' individual personalities were investigated. The research presented within this chapter explored how these individual traits affected the quality of the coach-athlete relationship over time. Through this mixed-method, longitudinal study, all four aims were successfully addressed, providing a comprehensive understanding of the complex interplay between personality traits and coach-athlete dynamics.

5.1 Summary of Findings, Contributions to the Literature and Applied Practice

5.1.1 Chapter 2

The research presented within Chapter 2 addressed the first, second, and third aim of the thesis, and is, to the best of our knowledge, the first work to examine the role of the Dark Triad and similarity within these traits on the quality of the coach-athlete relationship. By exploring how the Dark Triad is impacting the quality of the coach-athlete relationship in

swimming, cycling and triathlon, this chapter is an important step in the expansion of coach-athlete relationship literature.

In Chapter 2, our findings revealed that high levels of Dark Triad can reduce the quality of dyadic relationships for both coaches and athletes. For coaches, greater levels of narcissism, psychopathy and Machiavellian resulted in them reporting lower relationship quality. For athletes, greater levels of psychopathy and Machiavellianism resulted in their own relationship quality being reduced. In addition, greater levels of athlete Machiavellianism affected the coach's relationship quality. Finally, for both coaches and athletes, greater levels of dissimilarity on narcissism resulted in increased positive feelings about their relationship quality. These findings reflect similar studies in the wider Dark Triad literature: the traits are a negative aspect of an individual's personality within a relationship context (Song & Jeon, 2022). This reduction in relationship quality also seems relevant when assessing levels of similarity in narcissism for both coaches and athletes. It is apparent that the benefits that have been highlighted for similarity on other personality traits, such as decreased disagreements (Rammstedt et al., 2013), enhanced perceptions of a partner's emotions (Anderson et al., 2003), and relationship longevity (Arran-Becker 2013), may not apply to trait narcissism. This study therefore postulates a new idea, that although individuals high in narcissism have shown to be more tolerant and fonder of their narcissistic peers due to a perceived level of similarity (i.e., narcissistic-tolerance hypothesis; Hart & Adams, 2014), this only remains at a perceptual level and is not an actual similarity. Only Machiavellianism was found to have partner affects. Collectively, these findings indicate that the Dark Triad traits seemed to influence predominantly intrapersonal elements of the coach-athlete relationship. This would potentially mean that coaches and athletes focus on their own views of their relationship rather than trying to understand how their personality may be impacting their partner's view of their relationship quality. The practical implications for coaches and athletes to consider include: the extent to which they are individually contributing positively or negatively to their relationship; and the extent to which they are providing a joint

contribution to the effectiveness of their relationship (i.e., coach-athlete centred approach: Jowett & Slade, 2021).

5.1.2 Chapter 3

In Chapter 3, the first, second, and third aims of the thesis were addressed and the research presented in Chapter 2 was extended through a methodological approach i.e., the triangulation of quantitative (i.e., coaches' individual narcissism and relationship quality scores) and qualitative data sources (i.e., semi-structured interviews). Using the 3 + 1Cs model (Jowett 2007) the way in which similarity in trait narcissism influences coaches' perceptions of their relationship, and how this influenced their experience was explored. Developing the findings of the previous chapter, which suggests that the Dark Triad leads individuals to focus on their own perceptions of relationship quality, this chapter further highlights the impact of the coach's perceptions of narcissism in their coach-athlete relationship. Despite their own self-reported levels of relationship quality, due to the interdependence of this relationship, trait narcissism provides coaches with a self-enhancement opportunity: they aim to establish how good they are as a coach by demonstrating how good they are at creating a relationship with their athletes (Hepper et al., 2014; Wallace & Baumeister 2002). These findings could be due to the coach's lack of mutual understanding (i.e., co-orientation) heightening their feelings of vulnerability and the sense of being undervalued within their relationship even though narcissists profess to be confident individuals who hold overly optimistic views of their abilities and performance achievements (Robins & Beer, 2001).

This chapter allowed for potential recommendations to be formulated as coaches highlighted a range of techniques for creating effective coach-athlete relationships. Whilst some of the techniques coaches adopted cannot be condoned, such as control or manipulation, and also resulted in lower relationship quality, other techniques, such as not being overly dominant, understanding each other or allowing them to be themselves in their coach-athlete relationship, resulted in higher relationship quality, exemplifying key

strategies that enable coaches to utilise their personality most effectively. These strategies have been often reported in relationship contexts with regards to individuals high in narcissism (Wurst et al., 2017). This study adds to the current literature by demonstrating how similarity on this trait also influences the strategies coaches are currently adopting. In addition, this chapter highlights that coaches can still maintain higher relationship quality if they are similar or dissimilar to their athletes on narcissism. It appears that when coaches are able to understand the behaviours of their athletes and themselves with greater accuracy, it enables them to feel they can be themselves. They perceived that being able to be themselves enhanced the quality of their relationship and overall results in better performances. Whilst initially research found no relationship between narcissism and performance (Gabriel et al., 1994), more recent evidence has demonstrated that coaches who score higher in narcissism can produce greater performance outcomes from their athletes by teaching them that competition is a positive opportunity for self-enhancement (Nevicka et al., 2023). This chapter, therefore, highlights how coaches navigate individual differences, successfully and unsuccessfully, in pursuit of a high-quality coach-athlete relationship.

5.1.3 Chapter 4

Chapter 4 addressed all the aims of the thesis and explored how both elite coaches and athletes' personalities impacted the coach-athlete relationship over an eight-month period. In addition, an intervention element took place with each member of the dyad examining the impact of intra, interpersonal and situational effects of their personalities on their coach-athlete relationship quality. Prior to our study there have been repeated calls for longitudinal research on the coach-athlete relationship (Tshube & Hanrahan, 2018). Current empirical research has identified and examined the interaction of personality traits by relying heavily on cross-sectional quantitative methods (Jackson et al., 2011; Yang et al., 2015). This chapter provides a novel contribution to the current literature by examining the role of personality in the coach-athlete relationship through a mixed method approach. It utilised personality and relationship quantitative assessments in conjunction with semi-structured

individual, dyadic interviews, and daily observations in both training and competition settings. In addition, it offers an individualised intervention element, focusing on the intrapersonal, interpersonal, situational impacts and meta-perspectives of coaches and athletes' personalities and current relationships as defined by the 3 + 1Cs model.

The research reported in Chapter 4 presented a further addition to the literature by highlighting how both coaches and athletes' belief in each other's personality contributed to the relationship quality meta perspectives and perceptions of how they would perform. This aligns with previous literature that identified how personality traits can impact the quality of the coach-athlete relationship (Baudin et al., 2011; Jackson et al., 2011; Yang et al., 2015), demonstrating that personality traits contribute to coaches and athletes' relationship belief system, which, in turn, impacts the quality of their relationship. Consistent with previous research, enhancing the communication between coach and athlete provided a greater level of comfortability (i.e., feeling settled in a relationship and able to trust your partner and yourself) and belief within the dyad (Coulter et al., 2016; McAdams, 2013). However, relationship quality and the perception of each other's relationship and personality fluctuated depending on the extent to which desired performances were perceived to align with the dyadic goals at any point in time.

Through a comprehensive assessment of personalities within high-performance dyadic relationships both coaches and athletes exhibited a level of vulnerability towards each other which was either centred around themselves, their partner or their performance. By utilising the personality and relationship assessments, coaches and athletes were supported in managing each other's level of vulnerability through developing their understanding of why individuals in the relationship were behaving in particular ways, which led to greater levels of relationship stability over the course of the season. This highlights that narcissism in the elite domain contributes to a stronger desire to win and a greater fear of losing (González-Hernádez et al., 2020). These findings build on previous research by demonstrating that coaches and athletes should not wait for conflict to occur before focusing on their

communication skills but should use their personality traits to focus on the effects of their communication in order to maintain an effective coach-athlete relationship (Rhind & Jowett, 2010: Wachsmuth et al., 2018). Influenced by coaches and athletes' individual personalities, there was a fluctuation in the authority dynamic throughout the season, which could change rapidly within a session or more gradually over time. This shows that both coaches and athletes used their personalities to influence how much authority they needed at a particular point in time, shaping their interactions to work towards their desired performance outcomes together. Therefore, this study provides a strong rationale that coaches and athletes should work with each other's personalities to achieve an effective relationship.

5.1.4 Contributions to the Literature

Prior to this thesis there was limited insight into the role of personality in the coach-athlete relationship. Whilst there have been empirical investigations into broad personality traits (i.e., Big Five, McCrae & Costa, 2008) there has been a need to consider other traits that might be highly relevant within sport (Roberts & Woodman, 2017). The findings have addressed this gap by investigating the role of the Dark Triad and specific facets of narcissism within the coach-athlete relationship. Whilst these traits have been partially linked to greater levels of athletic performance (Nevicka et al., 2023; Vaughan & Madigan, 2021), they are all associated with disagreeableness (Paulhus & Williams, 2002), which can be damaging to interpersonal relationships such as the coach-athlete relationship. Evaluating how the positive and negative elements of these traits are perceived and utilised by the coach and athlete has generated new knowledge and insight into the role of personality within the coach-athlete relationship.

Developing the work of Stanford et al. (2022), which demonstrated that both coaches and athletes enhanced their coach-athlete relationship by utilising differences and similarities within personality traits, this thesis has continued to expand the literature on the role of similarity within the coach-athlete relationship and interpersonal relationships. The findings demonstrate that coaches and athletes can create effective relationships regardless

of being similar or dissimilar to one another. This contributes to the current literature by demonstrating that the skill of creating a high-quality coach-athlete relationship is for individuals, in particular those with traits that might be deemed as undesirable, to work together to utilise the strengths of their personality within their current environment (see findings from Chapter 2 & 3). As such, this research advances the theoretical perspective that only similarity on personality traits can be advantageous within dyadic relationships.

Longitudinal research has often been limited within the coach-athlete relationship literature and acknowledged as an area that should be addressed (Tshube & Hanrahan, 2018). Therefore, another key element of this thesis was employing personality and relationship assessments longitudinally by developing a mixed method approach to support and enhance the coach-athlete relationship through personality awareness. This extends the literature by providing an understanding of how relationship quality in high-performance dyads, and individual members' perspectives of their relationship, change throughout the course of a season. Capturing how the relationship and dyadic perceptions change over time provides a novel insight into how personality, in conjunction with relationship assessments, can be utilised in the applied domain.

This thesis has used a range of diverse methodologies, which have been called for within coach-athlete relationships literature (Poczwardowski et al., 2006). Personality research is often predominantly investigated through a quantitative approach. By utilising the 3+1C model (Jowett 2007), it has been demonstrated that qualitative, quantitative and mixed method approaches together can all contribute to not only advancing the understanding of the role of personality within the coach-athlete relationship but also demonstrate how a range of methodologies can be used. This is particularly advantageous when dealing with personality traits such as narcissism, because individuals high in this trait often self-report performing better than they actually do (Roberts et al., 2018). Therefore, by considering alternative methodologies, such as partner ratings (i.e., meta perspectives), observations and performance outcomes, a novel way of considering how individuals high in

narcissism operate within their interpersonal relationships in order to fulfil their self-grandiose image and their heightened perception of the quality of their relationship has been demonstrated.

5.2 Practical Implications

The findings of the research have all contributed to the fourth aim of providing recommendations and guidance for coaches, athletes and governing bodies on how to support an effective coach-athlete relationship. While individual sports, predominantly swimming, cycling, and triathlon, have been used to understand the role of personality in the coach-athlete relationship, it is believed that these findings could also be utilised across team sports as coach-athlete relationship quality has been shown to be lower in these groups (Rhind et al., 2012).

It is important to consider individual differences and similarities between the personalities of coaches and athletes because a strong link between an individual's personality and the quality of the coach-athlete relationship has been identified. For example, in Chapter 2 individuals high in narcissism can form an effective relationship if assigned to work with someone who is considerably lower in this trait to them. All Dark Triad traits were shown to have a large impact on intrapersonal elements of relationship quality, particularly for coaches. Practically, in the training or competition environment, when assessing coach-athlete relationship quality, an initial starting point should be to determine why the individuals believe their relationship quality to be that way using the 3 + 1Cs model (Jowett, 2007). For example, what are the associated feelings (i.e., closeness), thoughts (i.e., commitment), and behaviours (i.e., complementarity), and how might their own current understanding of their personality be contributing to their view of that relationship. It is advocated that coaches and athletes understand the impact of their own personalities on their relationship in the context they are in before examining the combined impact of their own and their partner's personalities on their relationship quality. This intrapersonal reflection should be considered before considering the impact of their partner's personality. If possible, this intervention

should initially be targeted towards coaches, with support from their governing bodies, line mangers or psychologists, as coaches often work with multiple athletes (and therefore multiple personality types) at a time. As it has been demonstrated that coaches are effective at teaching psychological based skills to their athletes (Arthur et al., 2019), it seems plausible that this approach could then be applied by them to support athletes in understanding the role of their personality within their coach-athlete relationship.

Chapter 3 has demonstrated that coaches can create a high-quality coach-athlete relationship regardless of their own varying levels of narcissism or the degree to which they are similar in this trait to their athletes. It has been previously advocated that coaches should be authentic to their own unique set of personality traits and utilise these positively to create a high-quality coach-athlete relationship (Stanford et al., 2022). However, this chapter has highlighted a number of strategies coaches can use when they feel their relationship quality is not at the level they desire. For example, this thesis supports the ideas from Roberts et al., (2015) who recommend working with (rather than against) an individual's narcissistic tendencies, whilst nurturing the relationship over time, to ensure opportunities for glory are continuously created (i.e., promoting the athletes being the most prepared, or the hardest workers). In addition, similarity in narcissism can enhance a coach-athlete relationship through a greater balance of power if both members are making joint contributions to achieve dyadic effectiveness (i.e., coach-athlete centred approach, Jowett & Slade, 2021). Therefore, coaches should ensure they avoid being overly dominant towards their athletes, take time to listen, manage their own and their athlete's emotions within the environment and establish clear boundaries to ensure the best possible chance of creating a high-quality coach-athlete relationship.

Coaches more frequently perceived that conflict would arise and was a natural part of a coach-athlete relationship. This was particularly apparent in coaches who were dissimilar in narcissism and reported low levels of relationship quality. This is surprising because the research presented in Chapter 2 demonstrated that a greater level of dissimilarity in

narcissism resulted in higher relationship quality. Conflicts were often small continual disagreements which could not be tolerated over time or a one-off episode that the relationship could not recover from. Therefore, effective conflict resolution is key to maintaining a strong coach-athlete relationship. Coaches and athletes should work together on conflict resolution rather than avoidance, particularly when personality differences are contributing to the tensions within the relationship. Conflict has been shown to be improved through enhanced communication (Davis et al., 2019), seeking out external help (Wachsmuth et al., 2018; Wachsmuth & Jowett, 2020), and holding people to account for their behaviours (Rhind & Jowett 2010). Based on the findings of this research, it is recommended that coaches and athletes are enabled to understand how their personality traits, particularly narcissism, contribute to or prevent conflict within their coach-athlete relationships, and then utilise empirically studied strategies to ensure resolution is achieved (e.g., through understanding and cooperation).

Within an applied sport setting, personality assessments have become popular as they try to help people to understand themselves, understand others, and adapt and connect better (Beauchamp et al., 2007). Chapter 4 highlighted the need for these profiles to be expanded to assess the current understanding of a coach-athlete relationship from an individual, meta and situational perspective in order to facilitate a deeper insight into to how an individual's personality contributes to the quality of their own and their partner's relationship, as well as provide a means to demonstrate areas of strength and potential improvement to the dyadic members. In high-performance environments it is crucial that coaches and athletes have the ability to work with diverse personality types in order to create an effective coach-athlete relationship. Education in the types of different personalities and how (dis)similarities interact could effectively and efficiently support higher relationship functionality and performance. Finally, Chapter 4 demonstrated that the quality of the coach-athlete relationship in high-performance environments was linked to the perceived level of performance. For example, when performance objectives were achieved, relationship quality

seem to be higher. Therefore, coaches and athletes should prioritise enhancing their relationships through the strategies employed in this chapter when performance levels are not meeting expectations before addressing any other areas, such as tactical, technical, or physiological.

5.3 Thesis Strengths, Limitations and Future Directions

There are numerous strengths of the research conducted in this thesis. First, across the three empirical chapters, a substantial sample size has been collected and analysed in order to address the research questions. This is even the case in Chapter 4, where although there were only six participants, due to the limited number of elite dyadic partnerships currently working in the United Kingdom, it remains representative of the population. As a result, there is high ecological validity across all three studies. Understandably, the Dark Triad and narcissism can often conjure up negative connotations within individuals. The research challenges this notion through its methodological design and unbiased understanding of narcissism (i.e., replacing the word narcissism with its definition). The result is a developed understanding of how all levels of narcissism (and more widely the Dark Triad traits) contribute to coach-athlete relationships, and how high-quality relationships can be achieved for all personality types. In addition, the research designs have tried as much as possible to utilise a methodological approach that provides new insight into the role these traits play within the coach-athlete relationship. They purposely sampled coaches across differing levels of (dis)similarity and utilised personality and relationship assessments to create individual interventions, which also included a meta-perspective from both members of the dyad.

Despite the various strengths of this research, there are important limitations that must be acknowledged. The thesis primarily adopts an interactional personality approach (Bowers, 1973), which recognises that coaches and athletes personalities do not operate in isolation, but instead influence each other within dynamic, interpersonal relationships. In this context, each individual effectively serves as a 'situation' for the other (Jowett &

Poczwardowski, 2007), suggesting that personality is not simply a fixed internal trait, but one that may be expressed differently depending on the relational dynamics and the specific individual they are engaging with. While this model rightly captures the social complexity of sport, it simultaneously assumes that personality traits remain relatively stable across different contexts. However, contemporary personality research challenges this assumption. According to Fleeson and Jayawickreme (2015), personality can vary meaningfully across the different domains of a person's life. Although core traits may be stable over time, their expression can shift based on environmental demands, role expectations, and situational stressors. For instance, a coach who is generally low in narcissism might still display self-aggrandising behaviours during periods of an athlete's success, driven by contextual pressures or the pursuit of recognition. This highlights the possibility that personality traits within sport-specific settings may differ from how they are expressed in other life domains, such as family or social engagement. This limitation is particularly pertinent given that the methodological approaches used in Chapters 2 and 3 did not directly assess how personality traits were enacted within the everyday and the relational context of coaching. As a result, the research in this thesis may underestimate how situational factors or role-specific demands impact the of personality within the coach–athlete relationship.

As the thesis progressed, a more specific focus on the role of trait narcissism developed, which limited our understanding of the role that psychopathy and Machiavellianism has within the coach-athlete relationship. As a consequence of the COVID-19 pandemic, athletes' perspectives could not be ascertained, which is a limitation of Chapter 3. The findings of this chapter may also have been subject to a response bias to some degree (Colbert et al., 2012), as the self-reported nature of the data in Chapter 2 may have limited some nuances of the coach-athlete relationship due to the reciprocal influence between both parties also not being ascertained. The research within this thesis was based in sports that are individual by nature, despite often being coached within a squad setting, in order to generate sport-specific results, as recommended (Hodgson et al., 2017). It is

difficult to determine to what extent each theme (Chapter 3 and 4) was present across the dyads, and at what point it most strongly supported each element of relationship quality (i.e., closeness, commitment and complementarity) throughout the season.

In addition, while the thesis offers valuable insight into how personality similarity influences the coach-athlete relationship, it does not explore relationship similarity, a potentially significant avenue of research. Although recent studies have begun to examine personality-based congruence (e.g., Baudin et al., 2011; Jackson et al., 2011), they often overlook the nuanced interplay of similarity and dissimilarity across the 3+1Cs model (closeness, commitment, complementarity, and co-orientation). For example, examining whether coaches and athletes report similar levels of complementarity, such as reciprocal behaviours of cooperation and responsiveness, could have shed light on how relational congruence affects perceptions of relationship quality. This would also have allowed for deeper exploration into co-orientation, that is, whether being similar in how coaches and athletes view their relationship (e.g., in terms of closeness or mutual understanding) might be more predictive of relationship outcomes than personality similarity alone. Including this perspective could have expanded the thesis by integrating a more relationally dynamic framework, offering a richer understanding of how congruent relationship perceptions, rather than just relative stable personality traits, shape the coach-athlete bond.

Future research should continue to explore the interplay between personality traits, the quality of the coach-athlete relationship, and associated performance outcomes. While the current thesis focused on personality similarity, a more nuanced understanding could emerge from examining which intrapersonal, interpersonal, or situational aspects of personality most influence relationship dynamics and athletic performance. This would allow researchers to investigate not just whether similarity matters, but under what conditions particular traits are most beneficial, or potentially detrimental, to the coach-athlete dyad. In addition, Chapters 2 and 3 of this thesis primarily sampled coaches and athletes based on performance level or perceived similarity, without fully considering how

specific personality traits shaped relationship quality. Future research could adopt a more targeted approach by examining dyads with contrasting traits (e.g., a coach high in narcissism working with an athlete low in narcissism, or high in psychopathy). While such designs may be limited by the typically low self-reported levels of these traits in sport populations and that have also been reported in this thesis, they offer important insight into how extreme or maladaptive traits may disrupt or enhance the coach-athlete relationship.

Recent studies have highlighted the importance of the coach-athlete relationship for performance outcomes (e.g., Anyadike-Danes et al., 2023; Phillips et al., 2023), yet the influence of individual differences such as personality has often been overlooked. For example, little is known about how diverse personality profiles affect relationship functioning within interdisciplinary performance teams, which often include sport psychologists, nutritionists, physiotherapists, physicians, and performance analysts. Exploring how coaches and athletes manage relationships across these diverse teams would provide a more holistic view of relational functioning in high-performance environments. A promising direction would be to assess relationship quality using the 3+1Cs model (Jowett, 2007), as introduced in Chapter 4 of this thesis. This framework allows for the evaluation of key relational constructs, closeness, commitment, complementarity, and co-orientation, and could be applied to coach-athlete dyads as well as broader team dynamics. Investigating how similarity or dissimilarity in these relational dimensions influences perceptions and performance would offer a richer, more relationally grounded understanding than personality alone. Jowett (2024) recently emphasized, there is a growing need for evidence-based interventions and training programs that develop both interpersonal and intrapersonal skills in coaches, athletes, and supporting staff. As the margins between winning and losing continue to narrow in elite sport, the capacity of individuals to build and sustain effective working relationships within complex performance environments will be critical to achieving success.

5.4 Conclusion

The findings presented in this thesis have expanded the current understanding of the role of personality within the coach-athlete relationship by indicating the importance of coaches and athletes understanding how their own and their partner's personalities determine each other's relationship outcomes. In addition, it provides recommendations to support better relationship quality, especially where personality traits which have previously been thought of as undesirable in interpersonal relations are present. It is believed that the empirical investigations provide an original and significant contribution to the coach-athlete relationship literature by extending the understanding of how personality impacts experiences and behaviours, particularly for coaches. Finally, a greater understanding of how coaches and athletes' personalities impacted their relationship over the course of a season has been achieved and strategies which can be adopted by governing bodies, sports psychologist, and coaching consultants to enhance the coach-athlete relationship have been devised. Practical implications have been discussed and potential avenues for future research suggested. Overall, the research presented within this thesis supports the belief that the coach-athlete relationship remains one of sports most valuable assets, due to its unique ability to unlock the full potential of both coach and athlete. A greater understanding of each other's personality can enable coaches and athletes to achieve their combined goals together.

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APPENDICES

APPENDIX A: SUPPLEMENTARY MATERIAL

A.1: Chapter 2: Model Fit

Table

Goodness of fit statistics for each structural equation models

	χ2	*Df*	CFI	RMSEA	RMSEA 90% CI	SRMR
Narcissism & Commitment	126.7*	81	0.94	0.04	[0.2, 0.5]	0.04
Narcissism & Closeness	129.4*	110	0.98	0.02	[0.0, 0.3]	0.04
Narcissism & Complementarily	193.4*	110	0.92	0.04	[0.3, 0.6]	0.06
Psychopathy & Commitment	190.9*	82	0.87	0.06	[0.5, 0.7]	0.06
Psychopathy & Closeness	230.5*	111	0.91	0.05	[0.4, 0.6]	0.06
Psychopathy & Complementarity	243.4*	110	0.88	0.06	[0.5, 0.7]	0.06
Machiavellianism & Commitment	141.6*	81	0.94	0.04	[0.3, 0.6]	0.04
Machiavellianism & Closeness	128.2*	110	0.98	0.02	[0.0, 0.3]	0.03
Machiavellianism & Complementarity	184.8*	110	0.94	0.04	[0.4, 0.5]	0.04

Note. $N = 316$; *$p < .05$. **$p < .01$. ***$p < .0$.

A.2: Chapter 3: Interview Guides
Interview Guide 1: Similarity in Personality and High Coach-Athlete Relationship Quality

Opening Statement

As you are aware, this is a follow up study from a piece of research you conducted with me last year. That study consisted of a series of measurements that looked at a range of differing personality traits, relationship quality and levels of self-awareness between yourself and the athlete that you selected to participate.

A particularly interesting finding was the role a particular personality trait (defined as being self-centred, self-aggrandizing, entitled, dominant, and manipulative) might play in a coach-athlete relationship. Therefore, the research team want to explore your ideas about this trait within your own coach-athlete relationship. Due to this trait often being thought of as negative, I think it is important for me to explain the position we take before starting this interview. Like all personality traits there are elements of this personality within us all. What is of interest, is the degree to which an individual might express this trait in a specific context. In contrast to the frequent negative connotations associated with this trait, research indicates that it can often be extremely beneficial, specifically in a performance domain, as it has been linked to improved performance under pressure, greater leadership and improved motivation, resilience, and coping skills within an elite environment.

As the context is key, I am specifically interested in your own experience of this type of personality to understand how your relationship works.

Section 1 – Background Questions & Understanding of Your Relationship

- How has [insert athlete's name] helped to support you in your current coaching career?

- Can you tell me about your relationship with [insert athletes athlete's name]?

- What do you think the benefits are of having a good quality coach-athlete relationship with [insert athlete's name]?

- How has this relationship developed to be so positive since you have been coaching [insert athlete's name]?
  ⇒ *Why is your relationship with [insert athletes* athlete's *name] so positive? (Probe)*

- What do you think are the benefits for a coach and an athlete in being self-centred, self-aggrandizing, entitled, dominant, and having a manipulative interpersonal orientation?
  ⇒ If you are a self-centred, self-aggrandizing, entitled, dominant, and manipulative of others type of person, how would this make you a better coach or athlete? *(Probe)*

- How would being this personality type help you coach [insert athlete's name] better?
  ⇒ *How does being* self-centred, self-aggrandizing, entitled, dominant, and manipulative towards [insert athlete's name] help you to coach them to the highest level *(Probe)*

- How do you think these characteristics support a better relationship quality with [insert athlete's name]?
  ⇒ *What would be the advantages in being* self-centred, self-aggrandizing, entitled, dominant, and manipulative *for your coach-athlete relationship? (Probe)*

Section 2 – Effects of Similarity on Relationship Quality

- How is your relationship quality influenced so positively because you and [insert athlete's name] have a similar level of a trait which is characterised as being self-centred, self-aggrandizing, entitled, dominant, and manipulative of others?
  - ⇒ Can you give me an example of a time this has happened?
  - ⇒ What are the benefits to your relationship if [insert athlete's name] thinks that your personality is great?
  - ⇒ *What do you think are the underpinning positive elements of your relationship (Probe)?*

- How do you show [insert athlete's name] how special you are?
  - ⇒ *What special personality characteristics that you have do you show to [insert athlete's name] (Probe)?*
  - ⇒ How does [insert athlete's name] show you their special personality characteristics?
  - ⇒ What is the positive impact on your relationship quality by being similar in showing each other how special you are?

- How do you draw and maintain the attention of [insert athlete's name] to what you are saying?
  - ⇒ *If [insert athlete's name] was not focussed during training, what would you do to change that? (Probe)*
  - ⇒ How does this ensure your relationship maintains it quality whilst being similar?

- How do you feel about the amount of admiration you get from [insert athlete's name]?
  - ⇒ How is this an advantage in your relationship being similar?
  - ⇒ *How much respect do you receive from [insert athlete's name] in your relationship? (Probe)*

- How would you feel your relationship quality has changed, in terms of the amount of privilege and status you both get from other coaches, athletes and organisations?
  - ⇒ *The more [insert athlete's name] has improved as an athlete how has the amount of privilege and status you have received? (Probe)*
  - ⇒ How has this positivity effected the quality of your relationship?

- What are the positive effects on your relationship when you see rivals underperform?
  - ⇒ *How is your relationship improved when competitors don't perform as well (Probe)?*

- What would be the positive effects on your relationship if [insert athlete's name] was the centre of attention throughout the whole program, with the wider sporting communities and with the governing bodies?
  - ⇒ *If no-one consulted, you about [insert athlete's name], how would this effect your relationship (Probe)?*

- If you received personal or backhanded remarks from [insert athlete's name], how would this effect your relationship?
  - ⇒ *If [insert athlete's name] said something to you that was personal – how would this effect your relationship (probe)?*

Section 3 – Implications For the Relationship In The Future

- How will knowing you are similar in this characteristic, to [insert athlete's name], allow you to maintain a better-quality relationship for the future?

⇒ *How would knowing that you are similar in this characteristic improve your relationship quality? (Probe)*

- What strategies have you used, or are going to use, now or in the future, when working with an athlete whom you felt you was similar to yourself, in the level of self-centredness, self-aggrandizement, entitlement, dominance?
  ⇒ *How would knowing about your athlete's level of this characteristic, in relation to your own level of the same characteristic, make a difference to your working relationship? (Probe)*

- Please could you summarise the main reasons why you have a positive relationship with [insert athlete's name] due to having similar levels of self-centredness, self-aggrandizing, entitled, dominant, and manipulative tendencies?
  ⇒ *Can you just sum up your key messages from today (Probe)?*

- Is there anything else in your relationship which is affected because of your similar levels of this personality trait?
  ⇒ *That is all my questions, is there anything else you would like to add? (Probe)*

Interview Guide 2: Dissimilarity in Personality and High Coach-Athlete Relationship Quality

Opening Statement

As you are aware, this is a follow up study from a piece of research you conducted with me last year. That study consisted of a series of measurements that looked at a range of differing personality traits, relationship quality and levels of self-awareness between yourself and the athlete that you selected to participate.

A particularly interesting finding was the role a particular personality trait (defined as being self-centred, self-aggrandizing, entitled, dominant, and manipulative) might play in a coach-athlete relationship. Therefore, the research team want to explore your ideas about this trait within your own coach-athlete relationship. Due to this trait often being thought of as negative, I think it is important for me to explain the position we take before starting this interview. Like all personality traits there are elements of this personality within us all. What is of interest, is the degree to which an individual might express this trait in a specific context. In contrast to the frequent negative connotations associated with this trait, research indicates that it can often be extremely beneficial, specifically in a performance domain, as it has been linked to improved performance under pressure, greater leadership and improved motivation, resilience, and coping skills within an elite environment.

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- How has this relationship developed to be so positive since you have been coaching [insert athlete's name]?
    ⇒ *Why is your relationship with [insert athletes* athlete's *name] so positive? (Probe)*

- What do you think are the benefits for a coach and an athlete in being self-centred, self-aggrandizing, entitled, dominant, and having a manipulative interpersonal orientation?
    ⇒ If you are a self-centred, self-aggrandizing, entitled, dominant, and manipulative of others type of person, how would this make you a better coach or athlete? *(Probe)*

- How would being this personality type help you coach [insert athlete's name] better?
    ⇒ *How does being* self-centred, self-aggrandizing, entitled, dominant, and manipulative towards [insert athlete's name] help you to coach them to the highest level *(Probe)*

- How do you think these characteristics support a better relationship quality with [insert athlete's name]?
    ⇒ *What would be the advantages in being* self-centred, self-aggrandizing, entitled, dominant, and manipulative *for your coach-athlete relationship? (Probe)*

Section 2 – Effects of Dissimilarity on Relationship Quality

- How is your relationship quality influenced so positively because you and [insert athlete's name] have a dissimilar level of a trait which is characterised as being self-centred, self-aggrandizing, entitled, dominant, and manipulative of others?
  - ⇒ Can you give me an example of a time this has happened?
  - ⇒ What are the benefits to your relationship if [insert athlete's name] thinks that your personality is great?
  - ⇒ *What do you think are the underpinning positive elements of your relationship (Probe)?*

- How do you show [insert athlete's name] how special you are?
  - ⇒ *What special personality characteristics that you have do you show to [insert athlete's name] (Probe)?*
  - ⇒ How does [insert athlete's name] show you their special personality characteristics?
  - ⇒ What is the positive impact on your relationship quality by showing each other how special you are?

- How do you draw and maintain the attention of [insert athlete's name] to what you are saying?
  - ⇒ *If [insert athlete's name] was not focussed during training, what would you do to change that? (Probe)*
  - ⇒ How does this ensure your relationship maintains it quality whiles being dissimilar?

- How do you feel about the amount of admiration you get from [insert athlete's name]?
  - ⇒ How is this an advantage in your relationship?
  - ⇒ *How much respect do you receive from [insert athlete's name] in your relationship? (Probe)*

- How would you feel your relationship quality has changed, in terms of the amount of privilege and status you both get from other coaches, athletes and organisations?
  - ⇒ *The more [insert athlete's name] has improved as an athlete how has the amount of privilege and status you have received? (Probe)*
  - ⇒ How has this positivity effected the quality of your relationship?

- What are the positive effects on your relationship when you see rivals underperform?
  - ⇒ *How is your relationship improved when competitors don't perform as well (Probe)?*

- What would be the positive effects on your relationship if [insert athlete's name] was the centre of attention throughout the whole program, with the wider sporting communities and with the governing bodies?
  - ⇒ *If no-one consulted, you about [insert athlete's name], how would this effect your relationship (Probe)?*

- If you received personal or backhanded remarks from [insert athlete's name], how would this effect your relationship?
  - ⇒ *If [insert athlete's name] said something to you that was personal – how would this effect your relationship (probe)?*

Section 3 – Implications For the Relationship in The Future

- How will knowing you are dissimilar in this characteristic, to [insert athlete's name], allow you to maintain a better-quality relationship for the future?
  ⇒ *How would knowing that you are similar in this characteristic improve your relationship quality? (Probe)*

- What strategies have you used, or are going to use, now or in the future, when working with an athlete whom you felt you was dissimilar to yourself, in the level of self-centredness, self-aggrandizement, entitlement, dominance?
  ⇒ *How would knowing about your athlete's level of this characteristic, in relation to your own level of the same characteristic, make a difference to your working relationship? (Probe)*

- Please could you summarise the main reasons why you have a positive relationship with [insert athlete's name] due to having dissimilar levels of self-centredness, self-aggrandizing, entitled, dominant, and manipulative tendencies?
  ⇒ *Can you just sum up your key messages from today (Probe)?*

- Is there anything else in your relationship which is affected because of your dissimilar levels of this personality trait?
  ⇒ *That is all my questions, is there anything else you would like to add? (Probe)*

Interview Guide 3: Similarity in Personality and Low Coach-Athlete Relationship Quality

Opening Statement

As you are aware, this is a follow up study from a piece of research you conducted with me last year. That study consisted of a series of measurements that looked at a range of differing personality traits, relationship quality and levels of self-awareness between yourself and the athlete that you selected to participate.

A particularly interesting finding was the role a particular personality trait (defined as being self-centred, self-aggrandizing, entitled, dominant, and manipulative) might play in a coach-athlete relationship. Therefore, the research team want to explore your ideas about this trait within your own coach-athlete relationship. Due to this trait often being thought of as negative, I think it is important for me to explain the position we take before starting this interview. Like all personality traits there are elements of this personality within us all. What is of interest, is the degree to which an individual might express this trait in a specific context. In contrast to the frequent negative connotations associated with this trait, research indicates that it can often be extremely beneficial, specifically in a performance domain, as it has been linked to improved performance under pressure, greater leadership and improved motivation, resilience, and coping skills within an elite environment.

As the context is key, I am specifically interested in your own experience of this type of personality to understand how your relationship works.

Section 1 – Background Questions & Understanding of Your Relationship

- How has [insert athlete's name] helped to support you in your current coaching career?

- Can you tell me about your relationship with [insert athletes athlete's name]?

- What do you think are the biggest challenges that affect the quality coach-athlete relationship with [insert athlete's name]?

- How have these challenges affected the development of your relationship quality since you have been coaching [insert athlete's name]?
  ⇒ *Why is your relationship with [insert athletes* athlete's *name] so positive? (Probe)*

- What do you think are the downsides for a coach and an athlete in being self-centred, self-aggrandizing, entitled, dominant, and having a manipulative interpersonal orientation?
  ⇒ If you are a self-centred, self-aggrandizing, entitled, dominant, and manipulative of others type of person, how would this make you a worst coach or athlete? *(Probe)*

- How would being this personality type detracted you from coaching [insert athlete's name] better?
  ⇒ *How does being* self-centred, self-aggrandizing, entitled, dominant, and manipulative towards [insert athlete's name] undermine you to coach them to the highest level *(Probe)*

- How do you think these characteristics undermine your relationship quality with [insert athlete's name]?
  ⇒ *What would be the disadvantages in being* self-centred, self-aggrandizing, entitled, dominant, and manipulative *for your coach-athlete relationship? (Probe)*

Section 2 – Effects of Similarity on Relationship Quality

- How is your relationship quality influenced so negatively because you and [insert athlete's name] have a similar level of a trait which is characterised as being self-centred, self-aggrandizing, entitled, dominant, and manipulative of others?
  - ⇒ Can you give me an example of a time this has happened?
  - ⇒ What are the disadvantages to your relationship if [insert athlete's name] thinks that your personality is great?
  - ⇒ *What do you think are the underpinning challenge elements of your relationship (Probe)?*

- How do you show [insert athlete's name] how special you are?
  - ⇒ *What special personality characteristics that you have do you show to [insert athlete's name] (Probe)?*
  - ⇒ How does [insert athlete's name] show you their special personality characteristics?
  - ⇒ What is the negative impact on your relationship quality by being similar in showing each other how special you are?

- How do you draw and maintain the attention of [insert athlete's name] to what you are saying?
  - ⇒ *If [insert athlete's name] was not focussed during training, what would you do to change that? (Probe)*
  - ⇒ When this happens how does it harm your relationship quality whilst being similar?

- How do you feel about the amount of admiration you get from [insert athlete's name]?
  - ⇒ How is this a disadvantage in your relationship, whilst being similar regarding the amount admiration you seek?
  - ⇒ *How much respect do you receive from [insert athlete's name] in your relationship? (Probe)*

- How would you feel your relationship quality has changed, in terms of the amount of privilege and status you both get from other coaches, athletes and organisations?
  - ⇒ *The more [insert athlete's name] has improved as an athlete how has the amount of privilege and status you have received? (Probe)*
  - ⇒ How has this negatively affected the quality of your relationship?

- What are the harmful effects on your relationship when you see rivals underperform?
  - ⇒ *How is your relationship improved when competitors don't perform as well (Probe)?*

- What would be the effects on your relationship if [insert athlete's name] was the centre of attention throughout the whole program, with the wider sporting communities and with the governing bodies?
  - ⇒ *If no-one consulted, you about [insert athlete's name], how would this effect your relationship (Probe)?*

- If you received personal or backhanded remarks from [insert athlete's name], how would this negatively affect your relationship?
  - ⇒ *If [insert athlete's name] said something to you that was personal – how would this effect your relationship (probe)?*

Section 3 – Implications for the relationship in the future

- How will knowing you are similar in this characteristic, to [insert athlete's name], allow you to overcome the challenges you face in order to have better-quality relationship for the future?
  ⇒ *How would knowing that you are similar in this characteristic improve your relationship quality? (Probe)*

- What strategies have you used, or are going to use, now or in the future, when working with an athlete whom you felt you was similar to yourself, in the level of self-centredness, self-aggrandizement, entitlement, dominance?
  ⇒ *How would knowing about your athlete's level of this characteristic, in relation to your own level of the same characteristic, make a difference to your working relationship? (Probe)*

- Please could you summarise the main challenges in your relationship with [insert athlete's name] due to having similar levels of self-centredness, self-aggrandizing, entitled, dominant, and manipulative tendencies?
  ⇒ *Can you just sum up your key messages from today (Probe)?*

- Is there anything else in your relationship which is affected because of your similar levels of this personality trait?
  ⇒ *That is all my questions, is there anything else you would like to add? (Probe)*

Interview Guide 4: Dissimilarity in Personality and Low Coach-Athlete Relationship Quality

Opening Statement

As you are aware, this is a follow up study from a piece of research you conducted with me last year. That study consisted of a series of measurements that looked at a range of differing personality traits, relationship quality and levels of self-awareness between yourself and the athlete that you selected to participate.

A particularly interesting finding was the role a particular personality trait (defined as being self-centred, self-aggrandizing, entitled, dominant, and manipulative) might play in a coach-athlete relationship. Therefore, the research team want to explore your ideas about this trait within your own coach-athlete relationship. Due to this trait often being thought of as negative, I think it is important for me to explain the position we take before starting this interview. Like all personality traits there are elements of this personality within us all. What is of interest, is the degree to which an individual might express this trait in a specific context. In contrast to the frequent negative connotations associated with this trait, research indicates that it can often be extremely beneficial, specifically in a performance domain, as it has been linked to improved performance under pressure, greater leadership and improved motivation, resilience, and coping skills within an elite environment.

As the context is key, I am specifically interested in your own experience of this type of personality to understand how your relationship works.

Section 1 – Background Questions & Understanding of Your Relationship

- How has [insert athlete's name] helped to support you in your current coaching career?

- Can you tell me about your relationship with [insert athletes athlete's name]?

- What do you think are the biggest challenges that affect the quality of your coach-athlete relationship with [insert athlete's name]?

- How have these challenges affected the development of your relationship quality since you have been coaching [insert athlete's name]?
  ⇒ *Why is your relationship with [insert athletes* athlete's *name] so positive? (Probe)*

- What do you think are the downsides for a coach and an athlete in being self-centred, self-aggrandizing, entitled, dominant, and having a manipulative interpersonal orientation?
  ⇒ If you are a self-centred, self-aggrandizing, entitled, dominant, and manipulative of others type of person, how would this make you a worst coach or athlete? *(Probe)*

- How would being this personality type detracted you from coaching [insert athlete's name] better?
  ⇒ *How does being* self-centred, self-aggrandizing, entitled, dominant, and manipulative towards [insert athlete's name] undermine you to coach them to the highest level *(Probe)*

- How do you think these characteristics undermine your relationship quality with [insert athlete's name]?
  ⇒ *What would be the disadvantages in being* self-centred, self-aggrandizing, entitled, dominant, and manipulative *for your coach-athlete relationship? (Probe)*

Section 2 – Effects of Dissimilarity on Relationship Quality

- How is your relationship quality influenced so negatively because you and [insert athlete's name] have a dissimilar level of a trait which is characterised as being self-centred, self-aggrandizing, entitled, dominant, and manipulative of others?
  - ⇒ Can you give me an example of a time this has happened?
  - ⇒ What are the disadvantages to your relationship if [insert athlete's name] thinks that your personality is great?
  - ⇒ *What do you think are the underpinning challenge elements of your relationship (Probe)?*

- How do you show [insert athlete's name] how special you are?
  - ⇒ *What special personality characteristics that you have do you show to [insert athlete's name] (Probe)?*
  - ⇒ How does [insert athlete's name] show you their special personality characteristics?
  - ⇒ What is the negative impact on your relationship quality by being dissimilar in showing each other how special you are?

- How do you draw and maintain the attention of [insert athlete's name] to what you are saying?
  - ⇒ *If [insert athlete's name] was not focussed during training, what would you do to change that? (Probe)*
  - ⇒ When this happens how does it harm your relationship quality whilst being dissimilar?

- How do you feel about the amount of admiration you get from [insert athlete's name]?
  - ⇒ How is this a disadvantage in your relationship, whilst being dissimilar regarding the amount admiration you seek?
  - ⇒ *How much respect do you receive from [insert athlete's name] in your relationship? (Probe)*

- How would you feel your relationship quality has changed, in terms of the amount of privilege and status you both get from other coaches, athletes and organisations?
  - ⇒ *The more [insert athlete's name] has improved as an athlete how has the amount of privilege and status you have received? (Probe)*
  - ⇒ How has this negatively affected the quality of your relationship?

- What are the harmful effects on your relationship when you see rivals underperform?
  - ⇒ *How does your relationship get worse when competitors don't perform as well (Probe)?*

- What would be the effects on your relationship if [insert athlete's name] was the centre of attention throughout the whole program, with the wider sporting communities and with the governing bodies?
  - ⇒ *If no-one consulted, you about [insert athlete's name], how would this effect your relationship (Probe)?*

- If you received personal or backhanded remarks from [insert athlete's name], how would this negatively affect your relationship?
  - ⇒ *If [insert athlete's name] said something to you that was personal – how would this effect your relationship (probe)?*

Section 3 – Implications for the relationship in the future

- How will knowing you are dissimilar in this characteristic, to [insert athlete's name], allow you to overcome the challenges you face in order to have better-quality relationship for the future?
  ⇒ *How would knowing that you are similar in this characteristic improve your relationship quality? (Probe)*

- What strategies have you used, or are going to use, now or in the future, when working with an athlete whom you felt you was dissimilar to yourself, in the level of self-centredness, self-aggrandizement, entitlement, dominance?
  ⇒ *How would knowing about your athlete's level of this characteristic, in relation to your own level of the same characteristic, make a difference to your working relationship? (Probe)*

- Please could you summarise the main challenges in your relationship with [insert athlete's name] due to having dissimilar levels of self-centredness, self-aggrandizing, entitled, dominant, and manipulative tendencies?
  ⇒ *Can you just sum up your key messages from today (Probe)?*

- Is there anything else in your relationship which is affected because of your similar levels of this personality trait?
  ⇒ *That is all my questions, is there anything else you would like to add? (Probe)*

A.3: Chapter 4: Interview Guides
Interview Guide 1: Time Point 1

Opening Statement

This research project is interested in the role that personality traits might play in a coach-athlete relationship. Within this study, one particular set of traits is broadly defined as being self-centred, self-aggrandizing, entitled, dominant, and manipulative.

Therefore, the research team want to explore your ideas about this trait within your own coach-athlete relationship. Due to this trait often being thought of as negative, it is important for me to explain the position we take before starting this interview. Like all personality traits, there are elements of this personality within us all. What is of interest is the degree to which an individual might express this trait in a specific context. In contrast to the frequent negative connotations associated with this trait, research indicates that it can often be extremely beneficial, specifically in a performance domain, as it has been linked to improved performance under pressure, greater leadership and improved motivation, resilience, and coping skills within an elite environment.

As the coach-athlete context is central to this research, I am specifically interested in your experience of this type of personality in order to understand how your relationship works.

Section 1: Background Questions & Understanding the Coach-Athlete Relationship

- Can you tell me about your relationship with [insert coach/athlete's name]?
    - ⇒ Can you give me an example of that (in relation to relationship)?
    - ⇒ *How is your relationship with your coach/athlete different from your ideal relationship? (Probe)*
    - ⇒ *How is your relationship different than with another coach/athlete's you have worked with? (Probe)*

- What do you think are the good qualities in your relationship with [insert coach/athlete's name]?
    - ⇒ *What makes your relationship positive with [insert coach/athlete's name]? (Probe)*

- What do you find are the challenges you have when working with [insert coach/athlete's name]?
    - ⇒ *What makes your relationship poor with [insert coach/athlete's name]? (Probe)*

- How has your relationship developed since you have been working with [insert coach/athlete's name]?
    - ⇒ *What changes have you seen in your relationship with [insert coach/athlete's name]? (Probe)*

Section 2: Understanding the Role of Personality in The Coach-Athlete Relationship
- How would you describe your personality?
    - ⇒ *What characteristics makes you who you are? (Probe)*

- How would you describe [insert coach/athlete's name] personality?
    - ⇒ *What characteristics makes [insert coach/athlete's name], who they are? (Probe)*

- To what extent do you think you have a similar personality with [insert coach/athlete's name]?
    - ⇒ *What areas of your personality are the same as [insert coach/athlete's name]? (Probe)*

- What do you think the role of being self-centred, self-aggrandizing, entitled, dominant, and having a manipulative interpersonal orientation has in your coach-athlete relationship?
  - ⇒ *If you are a self-centred, self-aggrandizing, entitled, dominant, and manipulative of others type of person, how would that affect your coach-athlete relationship? (Probe)*

- If [insert coach/athlete's name] were asked about how self-centred, self-aggrandizing, entitled, dominant, and manipulatively interpersonally orientated they thought they were, what do you think they would say?
  - ⇒ *How self-centred, self-aggrandizing, entitled, dominant, and manipulative does [insert coach's/athlete's name], do they think they are? (Probe)*

- What effect do you think the characteristics of [insert coach/athlete's name] being extremely high in confidence, self-esteem, and possessing a sense of superiority has on your coach-athlete relationship?
  - ⇒ *If [insert coach/athlete's name] were extremely confident, have high self-esteem and demonstrated that they thought of themselves as superior, how would this affect your coach-athlete relationship? (Probe).*
  - ⇒ Can you give me an example how that is evident in your relationship?

- If [insert coach/athlete's name] were asked about your levels of confidence, self-esteem, and sense of superiority, what do you think they would say?
  - ⇒ *How confident, high in self-esteem, and demonstrating superiority would [insert coach/athlete's name], say you are? (Probe)*
  - ⇒ Why do you think they might say that?

- What effects do you think the characteristics of being hyper-sensitive to rejection, negative emotion, and social isolation; distrusting of others; and having high levels of anger and hostility have on your coach-athlete relationship?
  - ⇒ *If you were hyper-sensitive to rejection, negative emotion, and social isolation, distrusting of others, and had high levels of anger and hostility, how would your coach-athlete relationship be affected? (Probe).*
  - ⇒ Can you give me an example how that would be apparent in your relationship?

- If [insert coach/athlete's name] were asked about your levels of hyper-sensitivity to rejection, negative emotion and social isolation, distrust of others, and levels of anger and hostility, what do you think they would say?
  - ⇒ *How hyper-sensitive to rejection, negative emotion, social isolation, distrusting of others, and angry and hostile would [insert coach/athlete's name], say you are? (Probe)*
  - ⇒ Why do you think they might say that?

Section 3: The Role of Personality Mechanisms in The Coach-Athlete Relationship

- How might your behaviour be seen as extraverted, boastful, dominant, and manipulative in your coach-athlete relationship?
  - ⇒ *How might you show that you have a high self-view and are seeking admiration through self- promotion? (Probe)*
  - ⇒ What are the effects on your relationship because of this?
  - ⇒ Can you give an example?

- How does [insert coach/athlete's name] behave in an extroverted, boastful dominant and manipulative way?

⇒ *How does [insert coach/athlete's name] display a heightened self-view through seeking admiration and self-promotion in your coach-athlete relationship? (Probe)*

⇒ What are the effects on your relationship because of this?

⇒ Can you give an example?

- How might you display a heightened self-view through diminishing others in your coach-athlete relationship?
  ⇒ *How might you show high levels of resentment by putting [insert coach/athlete's name] down? (Probe)*
  ⇒ Can you give an example?
  ⇒ How does this affect your relationship?

- How does [insert coach/athlete's name] display a heightened self-view through diminishing others in your coach-athlete relationship?
  ⇒ *How might* [insert coach/athlete's name] *show high levels of resentment by putting you down? (Probe)*
  ⇒ Can you give an example?
  ⇒ How does this affect your relationship?

- How do you think your personality characteristics, which we have discussed today, might be hidden from [insert coach/athlete's name]?
  ⇒ *How might you conceal your personality from [insert coach/athlete's name]? (Probe)*
  ⇒ Can you give an example?

- How do you think [insert coach/athlete's name] may hide the personality characteristics we have discussed today?
  ⇒ *How might [insert coach/athlete's name] conceal their personality from you? (Probe)*
  ⇒ Can you give an example?

Interview Guide 2: Time Point 2

Opening Statement

Just to remind you this research project is interested in the role that personality traits might play in a coach-athlete relationship. Within this study, one particular set of traits is broadly defined as being self-centred, self-aggrandizing, entitled, dominant, and manipulative.

Therefore, the research team want to explore your ideas about this trait within your own coach-athlete relationship. Due to this trait often being thought of as negative, it is important for me to explain the position we take before starting this interview. Like all personality traits, there are elements of this personality within us all. What is of interest is the degree to which an individual might express this trait in a specific context. In contrast to the frequent negative connotations associated with this trait, research indicates that it can often be extremely beneficial, specifically in a performance domain, as it has been linked to improved performance under pressure, greater leadership and improved motivation, resilience, and coping skills within an elite environment.

As the coach-athlete context is central to this research, I am specifically interested in your experience of this type of personality in order to understand how your relationship works.

Reflections Since Our Last Interview

- Reflecting on since the last time we spoke, tell me about your relationship with [insert coach/athlete's name]?
  ⇒ Can you give me an example of that (in relation to relationship)?
  ⇒ *How is your relationship with your coach/athlete different from your ideal relationship since we last spoke? (Probe)*

- We descried your personality profile last time we did an interview together. How has this effected your working relationship with [insert coach/athlete's name]?
  ⇒ *How has having an insight into your personality effected your relationship with [insert coach/athlete's name]? (Probe)*
  ⇒ Can you say more about that?

- What effect do you think the characteristics of [insert coach/athlete's name] being extremely high in confidence, self-esteem, and possessing a sense of superiority has on your coach-athlete relationship?
  ⇒ *If [insert coach/athlete's name] were extremely confident, have high self-esteem and demonstrated that they thought of themselves as superior, how would this affect your coach-athlete relationship? (Probe).*
  ⇒ Can you give me an example how that is evident in your relationship since we last spoke?

- What effects do you think the characteristics of being hyper-sensitive to rejection, negative emotion, and social isolation; distrusting of others; and having high levels of anger and hostility have on your coach-athlete relationship since we last spoke?
  ⇒ *If you were hyper-sensitive to rejection, negative emotion, and social isolation, distrusting of others, and had high levels of anger and hostility, how would your coach-athlete relationship be affected? (Probe).*
  ⇒ Can you give me an example how that would be apparent in your relationship since we last spoke?

  - How has your behaviour been seen as extraverted, boastful, dominant, and manipulative in your coach-athlete relationship since we last spoke??
  ⇒ *How might you* show that you have a high self-view and are seeking admiration through self- promotion since we last spoke? (Probe*)*

⇒ What are the effects on your relationship because of this?
⇒ Can you give an example?

- How do you think your personality characteristics, which we have discussed today, might be hidden from [insert coach/athlete's name]?
  ⇒ *How might you conceal your personality from [insert coach/athlete's name]? (Probe)*
  ⇒ Can you give an example?

Interview Guide 3: Time Point 3

Opening Statement

Just to remind you this research project is interested in the role that personality traits might play in a coach-athlete relationship. Within this study, one particular set of traits is broadly defined as being self-centred, self-aggrandizing, entitled, dominant, and manipulative.

Therefore, the research team want to explore your ideas about this trait within your own coach-athlete relationship. Due to this trait often being thought of as negative, it is important for me to explain the position we take before starting this interview. Like all personality traits, there are elements of this personality within us all. What is of interest is the degree to which an individual might express this trait in a specific context. In contrast to the frequent negative connotations associated with this trait, research indicates that it can often be extremely beneficial, specifically in a performance domain, as it has been linked to improved performance under pressure, greater leadership and improved motivation, resilience, and coping skills within an elite environment.

As the coach-athlete context is central to this research, I am specifically interested in your experience of this type of personality in order to understand how your relationship works.

Reflections Since Our Last Interview

- Reflecting on since the last time we spoke, tell me about your relationship with [insert coach/athlete's name]?
  ⇒ Can you give me an example of that (in relation to relationship)?
  ⇒ *How is your relationship with your coach/athlete different from your ideal relationship since we last spoke? (Probe)*

- We descried your personality profile last time we did an interview together. How has this effected your working relationship with [insert coach/athlete's name]?
  ⇒ *How has having an insight into your personality effected your relationship with [insert coach/athlete's name]? (Probe)*
  ⇒ Can you say more about that?

- What effect do you think the characteristics of [insert coach/athlete's name] being extremely high in confidence, self-esteem, and possessing a sense of superiority has on your coach-athlete relationship?
  ⇒ *If [insert coach/athlete's name] were extremely confident, have high self-esteem and demonstrated that they thought of themselves as superior, how would this affect your coach-athlete relationship? (Probe).*
  ⇒ Can you give me an example how that is evident in your relationship since we last spoke?

- What effects do you think the characteristics of being hyper-sensitive to rejection, negative emotion, and social isolation; distrusting of others; and having high levels of anger and hostility have on your coach-athlete relationship since we last spoke?
  ⇒ *If you were hyper-sensitive to rejection, negative emotion, and social isolation, distrusting of others, and had high levels of anger and hostility, how would your coach-athlete relationship be affected? (Probe).*
  ⇒ Can you give me an example how that would be apparent in your relationship since we last spoke?

  - How has your behaviour been seen as extraverted, boastful, dominant, and manipulative in your coach-athlete relationship since we last spoke??
  ⇒ *How might you* show that you have a high self-view and are seeking admiration through self- promotion since we last spoke? (Probe*)*

⇒ What are the effects on your relationship because of this?
⇒ Can you give an example?

- How have the strategies help you support a more positive coach-athlete relationship please discuss each strategy individually.

- How do you think your personality characteristics, which we have discussed today, might be hidden from [insert coach/athlete's name]?
  ⇒ *How might you conceal your personality from [insert coach/athlete's name]? (Probe)*
  ⇒ Can you give an example?

APPENDIX B: PARTICIPANT INFORMATION SHEET, ASSENT AND CONSENT

FORMS

B.1: Chapter 2

Effects of Personality Traits in Coach-Athlete Relationship Information Sheet

Brief Introduction

The effectiveness between both coaches and athletes to work together is important in the pursuit of athlete success. Studies prior to this have shown individuals' personality traits may play an important role in interpersonal relationships in sport. But further understanding is still needed to understand the effects of personality profiles on coach-athlete relationship satisfaction. Therefore, the aim of this study is to examine how the personality profiles of both coach and athlete is related to relationship satisfaction.

This research will be a postgraduate research project conducted by Joseph Stanford, a postgraduate student at Nottingham Trent University, and supervised by Dr. Laura Healy, Senior Lecturer in Sport Coaching at Nottingham Trent University. Dr. Julie Johnston (Nottingham Trent University), Dr. Mustafa Sarkar (Nottingham Trent University) and Dr. Ross Roberts (Bangor University).

Study Requirements

You will be asked complete a range of questionnaires related to your personality, your coach/athlete's personality and how satisfied you are in your current coach-athlete relationship. The questionnaires will approximately 20 minutes to complete of your time. These can be completed online, or copies can be posted out on request.

What happens to the information I provide?

We will use your questionnaire when reporting the findings of the study. However, you will not be identifiable as you will be anonymised. Therefore, it will not be possible to identity individual participants. Hardcopies of research materials will be stored securely (i.e., in a locked cabinet) during the project. Following completion of the data collection, questionnaires and consent forms will be separated (anonymising the questionnaires/raw data). All hardcopies of research materials will be digitised and destroyed. Digital research materials are in line with BPS Ethics Guidelines for Internet-Mediated Research to ensure your online safety. Digital data will be stored on a password protected on an NTU DataStore. No one will see the content of your questionnaire except the research team.

What If I Want to Withdraw?

You are free to withdraw your participation from the study. If you wish to withdraw your participation after the completion of the questionnaire, please contact the lead researcher (Joseph Stanford) quoting your unique participant number. Data will be removed within 14 days of your request to withdraw. Data usage will begin on 1st March 2021; therefore, you must request to withdraw no later than 15th February 2021. After this time, the data will be analysed. Withdrawing from the study will have no bearing on your selection/de-selection in your sport and your decision to withdraw from the study will not be shared with anyone outside the research team. Details of how you can be contacted are below.

Contacts

If you wish to ask any further questions about the study, please feel free to contact the lead researcher (Joseph Stanford). Alternatively, if you wish to contact a senior member of the research team, please feel free to contact my research supervisor at Nottingham Trent university (0115 8485516).

Lead Researcher:	**Research Supervisor:**
Joseph Stanford	Dr Laura Healy
Department of Sports Science	Erasmus Darwin 249
Nottingham Trent University	Department of Sports Science
Clifton Campus, Clifton Lance	Nottingham Trent University
Nottingham	Clifton Campus, Clifton Lance
NG11 8NS	Nottingham
Email: joseph.stanford2015@my.ntu.ac.uk	NG11 8NS
	Email: laura.healy@ntu.ac.uk

Effects of Personality Traits in Coach-Athlete Relationship

Research Participation Consent Form

Please tick all boxes and date and sign were indicated below:

A.	I confirm that I have read and understood the information sheet for the above study and understand what is expected of me.	□
B.	I confirm that I have been given the opportunity to ask questions regarding the study and, if asked, my questions were answered to my full satisfaction.	□
C.	I understand that my participation is voluntary. I also understand that I may withdraw until 1st March 2021 without giving a reason for my withdrawal and without penalty. To withdraw, I understand that I can contact the lead researcher, using details provided on the information sheet, and provide the unique participant code.	□
D.	I understand that all information about me will be treated in strict confidence and that I will not be identified in any written work arising from this study.	□
E.	I understand that data collected about me during my participation in this study will be stored on the NTU Data Store which is password-protected and that any files containing information about me will be made anonymous.	□
F.	I give my consent for the analysis of my answers from the questionnaire.	□

Once you have read and agreed with above statements (A - F), please generate a unique participant code in order to consent to take part in the project.

Participant Code Generator
Favourite colour + first 3 letters of your father's first name: ………… + …………

Participant name (please print): _____

Signature: _____

Date: _____

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Effects of Personality Traits in Coach-Athlete Relationship

Parent/Guardian Statement of Consent for Child/Dependent to Participate in the Project

Please tick all boxes and date and sign were indicated below:

A. I understand from the participant information sheet, which I have read in full, that my child/dependent will be partake in a series online or postal questionnaire. ☐

B. I confirm that the study has been explained to my child/dependent and that I and my child/dependent have had the opportunity to ask questions about the study. Where we have asked questions, these have been answered to our satisfaction. ☐

C. I am aware that I can withdraw my consent for my child/dependent to participate in the procedure at any time (until the 1st March 2021) and for any reason, without having to explain my withdrawal and their personal data will be destroyed ☐

D. I understand that any personal information regarding my child/dependent, gained through their participation in this study, will be treated as confidential and only handled by individuals relevant to the performance of the study and the storing of information thereafter. Where information concerning my child/dependent appears within published material, their identity will be kept anonymous. ☐

E. I understand that data collected about my child/dependent during their participation in this study will be stored on the NTU Data Store which is password-protected and that any files containing information about me will be made anonymous. ☐

F. I agree for my child/dependent *to* partake as a participant in the above study. ☐

Once you have read and agreed with above statements (A - F), please make a note of your child/dependent unique participant code on their consent form and sing and date the below.

Parent/Guardian (please print): _____

Signature: _____

Date: _____.

*Please note participants aged 18+ years old do not need parental consent.

B.2: Chapter 3

Personality Traits in The Coach-Athlete Dyads Follow Up Study
Information Sheet

Brief Introduction

In the pursuit of athletic success, it is important that coaches and athletes work together effectively. Previous studies have shown individuals' personality traits may play an important role in interpersonal sports relationships. Following the initial research, you have taken part in with Nottingham Trent University, further research is now needed to understand how your personality and that of your coach/athlete's contributes to your interpersonal relationship. Therefore, the aim of this study is to explore how similarity or dissimilarity of personality traits shape your current coach-athlete relationship. This research will be a postgraduate research project conducted by Joseph Stanford, a Post Graduate student at Nottingham Trent University, and supervised by Dr. Julie Johnson, Senior Lecturer at Nottingham Trent University.

Study requirements

You will be invited to participate in a semi-structured interview, with the researcher. During the interview, you will be invited to discuss a range of topics, including your thoughts on personality traits in relation to your sport, and your relationship with your coach/athlete. A video call will be used to record the interviews. Each interview will last approximately 1 hour and will take place on Microsoft Teams at a time that is convenient to you.

What happens to the information I provide?

NTU will be responsible for the secure storage and management of data during the study. Once the study is over, anonymity for individuals and their affiliated organisations will be achieved through the use of pseudonyms and all other personal information will be de-identified. Your data will be transcribed and stored securely in a locked filing cabinet, in a locked room, that will only be accessible to the lead researcher (Joseph Stanford) until ready to be deposited in the NTU Data Store. Transcription will be completed by the lead researcher, online software or a NTU endorsed transcription service which is GDPR compliant. Only research data that would allow others to check and verify research findings will be stored. The NTU Data Store is an archive of research data and will preserve data for at least five years. Anonymous data will be publicly available. This will allow anyone else (such as, researchers, businesses, governments, charities, and the general public) to use the anonymised data for any purpose that they wish, providing they credit the University and research team as the original creators. However, if due to the specific nature of the research, there remains any potential for the participants or their affiliated organisations to be identified, only researchers approved by NTU will be granted access to the material and only for the purpose of ethically approved research. Furthermore, they will be required, ethically and legally, to work to protect your identity. The data from your interview will be used to inform a final report, journal article and thesis which will be publicly available.

What If I Want to Withdraw?

Having agreed to participate in this study, you can withdraw at any time 2 weeks after my interview, by contacting the lead researcher (Joseph Stanford) and quoting your ID number, which can be found at the top of this information sheet. You do not need to give a reason if you wish to withdrawal and there will be no penalties if you do so.

Contacts

If you wish to ask any further questions about the study, please feel free to contact the lead researcher (Joseph Stanford). Alternatively, if you wish to contact a senior member of the research team, please feel free to contact the research supervisor (Dr. Julie Johnston) at Nottingham Trent University.

Lead Researcher:
Joseph Stanford – Lead Research
Department of Sports Science
Nottingham Trent University
Clifton Campus, Nottingham, NG11 8NS
Email: joseph.stanford2015@my.ntu.a.uk

Research Supervisor:
Dr Julie Johnston - Senior Lecturer
Department of Sports Science
Nottingham Trent University
Clifton Campus, Nottingham, NG11 8NS
Email: julie.johnston@nut.ac.uk

Personality Traits in The Coach-Athlete Dyads Follow Up Study Research Participation Consent Form

Please tick all boxes and date and sign were indicated below:

A. I confirm that I have read and understood the information sheet for the above study and understand what is expected of me. □

B. I confirm that I have been given the opportunity to ask questions regarding the study and, if asked, my questions were answered to my full satisfaction. □

□

C. I understand that my participation is voluntary. I also understand that I may withdraw until 2 weeks after my interview without giving a reason for my withdrawal and without penalty. To withdraw, I understand that I can contact the lead researcher, using details provided on the information sheet, and provide the unique participant code.

D. I give my permission for both audio and video to be recorded during the interview.

□

E. I understand that data collected during this study will be processed in accordance with data protection law as explained in the Participant Information Sheet and that my personal data will remain confidential. □

F. I give my consent for the analysis of my answers from the interview to be written up for the purpose of publication, but only in a way that will not identify me. □

G. I give my consent for the interview transcripts, which could indirectly disclose my identity, to be shared for the purposes of future ethically approved research, but only if researchers agree to preserve the confidentiality of the information as requested in this form. □

Once you have read and agreed with above statements (A - G), please sign and date below.

Participant name (please print): _____

Signature: _____

Date: _____

Participant Code Generator: Favourite colour + first 3 letters of your favourite animal: ………… + …………

Personality Traits in High-Performance Coach-Athlete Relationships
Information Sheet

Brief Introduction

In the pursuit of athletic success, it is important that coaches and athletes work together effectively. Previous studies have shown individuals' personality traits may play an important role in interpersonal sports relationships. Following the initial research, you have taken part in with Nottingham Trent University, further research is now needed to understand how your personality and that of your coach/athlete's contributes to your interpersonal relationship. Therefore, the aim of this study is to explore how similarity or dissimilarity of personality traits shape your current coach-athlete relationship. This research will be a postgraduate research project conducted by Joseph Stanford, a Post Graduate student at Nottingham Trent University, and supervised by Dr. Laura Healy, Senior Lecturer at Nottingham Trent University.

Study Requirements

The study will involve the Lead Researcher spending several days a week, over a period of 7 months, working in and carrying out research in your current performance squad. During the study you may be asked to:

- Participate in formal or informal interviews lasting around 60 minutes. The interviews will be recorded on an audio & video device, so they can be transcribed later for analysis.
- Completed a series of personality profiling questions regarding your own and your coaches/athlete personality.
- Allow the researcher to observe relevant meetings, training and competitions environments with yourself and your coach/athletes.

What Happens to The Information I Provide?

NTU will be responsible for the secure storage and management of data during the study. Once the study is over, anonymity for individuals and their affiliated organisations will be achieved through the use of pseudonyms and all other personal information will be de-identified. Your data will be transcribed and stored securely in a locked filing cabinet, in a locked room, that will only be accessible to the lead researcher (Joseph Stanford) until ready to be deposited in the NTU Data Store. Transcription will be completed by the lead researcher, online software or a NTU endorsed transcription service which is GDPR compliant. Only research data that would allow others to check and verify research findings will be stored. The NTU Data Store is an archive of research data and will preserve data for at least five years. Anonymous data will be publicly available. This will allow anyone else (such as, researchers, businesses, governments, charities, and the general public) to use the anonymised data for any purpose that they wish, providing they credit the University and research team as the original creators. However, if due to the specific nature of the research, there remains any potential for the participants or their affiliated organisations to be identified, only researchers approved by NTU will be granted access to the material and only for the purpose of ethically approved research. Furthermore, they will be required, ethically and legally, to work to protect your identity. The data from your interview will be used to inform a final report, journal article and thesis which will be publicly available.

What If I Want to Withdraw?

Having agreed to participate in this study, you can withdraw at any time before 30th July 2023, by contacting the lead researcher (Joseph Stanford) and quoting your ID number, which can be found at the top of this information sheet. You do not need to give a reason if you wish to withdrawal and there will be no penalties if you do so. After this date it will not be possible to withdraw any data collected about yourself.

Contacts

If you wish to ask any further questions about the study, please feel free to contact the lead researcher (Joseph Stanford). Alternatively, if you wish to contact a senior member of the research team, please feel free to contact the research supervisor (Dr. Laura Healy) at Nottingham Trent University.

Lead Researcher:	**Research Supervisor:**
Joseph Stanford – Lead Research	Dr Laura Healy - Senior Lecturer
Department of Sports Science	Department of Sports Science
Nottingham Trent University	Nottingham Trent University
Clifton Campus, Nottingham, NG11 8NS	Clifton Campus, Nottingham, NG11 8NS
Email: joseph.stanford2015@my.ntu.a.uk	Email: Laura.Healy@nut.ac.uk

Personality Traits in High-Performance Coach-Athlete Relationships
Consent Form

Please tick all boxes and date and sign were indicated below:

A. I confirm that I have read and understood the information sheet for the above study and understand what is expected of me. ☐

B. I confirm that I have been given the opportunity to ask questions regarding the study and, if asked, my questions were answered to my full satisfaction. ☐

☐

C. I understand that my participation is voluntary. I also understand that I may withdraw until July 30th, 2023, without giving a reason for my withdrawal and without penalty. To withdraw, I understand that I can contact the lead researcher, using details provided on the information sheet, and provide the unique participant code. After this date it will not be possible to withdraw any data collected about yourself.

D. I give my permission for both audio and video to be recorded during the interview and the researcher observations between yourself and your coach/athlete. ☐

E. I understand that data collected during this study will be processed in accordance with data protection law as explained in the Participant Information Sheet and that my personal data will remain confidential. ☐

F. I give my consent for the analysis of my answers from the interview and personality profiling to be written up for the purpose of publication, but only in a way that will not identify me. ☐

G. I give my consent for the interview transcripts, which could indirectly disclose my identity, to be shared for the purposes of future ethically approved research, but only if researchers agree to preserve the confidentiality of the information as requested in this form. ☐

H. I confirm I am 18 years + ☐

Once you have read and agreed with above statements (A - H), please sign and date below.

Participant name (please print) : _____

Signature :   _____

Date :   _____

APPENDIX C : QUESTIONNAIRES

C.1: The Dark Triad Dirty Dozen Questionnaire

	Strongly Disagree				Agree Strongly
I tend to want others to admire me.	1	2	3	4	5
I tend to want others to pay attention to me.	1	2	3	4	5
I tend to expect special favours from others. .	1	2	3	4	5
I tend to seek prestige or status.	1	2	3	4	5
I tend to lack remorse.	1	2	3	4	5
I tend to be callous or insensitive.	1	2	3	4	5
I tend to not be too concerned with morality or the morality of my actions.	1	2	3	4	5
I tend to be cynical.	1	2	3	4	5
I have used deceit or lied to get my way.	1	2	3	4	5
I tend to manipulate others to get my way.	1	2	3	4	5
I have used flattery to get my way.	1	2	3	4	5
I tend to exploit others towards my own end.	1	2	3	4	5

C.2: Coach-Athlete Relationship Questionnaire: Athlete

	Strongly Disagree						Agree Strongly
I feel close to my coach	1	2	3	4	5	6	7
I feel committed to my coach	1	2	3	4	5	6	7
I feel that my sport career is promising with my coach	1	2	3	4	5	6	7
I like my coach	1	2	3	4	5	6	7
I trust my coach	1	2	3	4	5	6	7
I respect my coach	1	2	3	4	5	6	7
I feel appreciation for the sacrifices my coach has experienced in order to improve his/her performance	1	2	3	4	5	6	7
When I am coached by my coach, I feel at ease	1	2	3	4	5	6	7
When I am coached by my coach, I feel responsive to his/her efforts	1	2	3	4	5	6	7
When I am coached by my coach, I am ready to do my best	1	2	3	4	5	6	7
When I am coached by my coach, I adopt a friendly stance	1	2	3	4	5	6	7

C.3: Coach-Athlete Relationship Questionnaire: Coach

	Strongly Disagree						Agree Strongly
I feel close to my athlete	1	2	3	4	5	6	7
I feel committed to my athlete	1	2	3	4	5	6	7
I feel that my sport career is promising with my athlete	1	2	3	4	5	6	7
I like my athlete	1	2	3	4	5	6	7
I trust my athlete	1	2	3	4	5	6	7
I respect my athlete	1	2	3	4	5	6	7
I feel appreciation for the sacrifices my athlete h has experienced in order to improve his/her performance	1	2	3	4	5	6	7
When I coach my athlete, I feel at ease	1	2	3	4	5	6	7
When I coach my athlete, I feel responsive to his/her efforts	1	2	3	4	5	6	7
When I coach my athlete, I am ready to do my best	1	2	3	4	5	6	7
When I coach my athlete, I adopt a friendly stance	1	2	3	4	5	6	7

C.4: Ten Item Personality Inventory

	Strongly Disagree	Disagree Moderately	Disagree A Little	Neither Agree nor Disagree	Agree A Little Strongly	Agree Moderately	Agree Strongly
Extraverted, enthusiastic.	1	2	3	4	5	6	7
Critical, quarrelsome.	1	2	3	4	5	6	7
Dependable, self-disciplined.	1	2	3	4	5	6	7
Anxious, easily upset.	1	2	3	4	5	6	7
Open to new experiences, complex.	1	2	3	4	5	6	7
Reserved, quiet.	1	2	3	4	5	6	7
Sympathetic, warm.	1	2	3	4	5	6	7
Disorganized, careless.	1	2	3	4	5	6	7
Calm, emotionally stable.	1	2	3	4	5	6	7
Conventional, uncreative	1	2	3	4	5	6	7

C.5: Narcissistic Personality Inventory

Please circle statement A or B that describes your coach

A	They have a natural talent for influencing people	**B**	They are not good at influencing people.
A	Modesty doesn't become them	**B**	They are essentially a modest person.
A	They would do almost anything on a dare	**B**	They tend to be a fairly cautious person.
A	When people compliment them, they sometimes get embarrassed.	**B**	They know that they are good because everybody keeps telling me so.
A	The thought of ruling the world frightens the hell out of them.	**B**	If they ruled the world, they would think it would be better place
A	They can usually talk their way out of anything.	**B**	They try to accept the consequences of their behaviour.
A	They prefer to blend in with the crowd	**B**	They like to be the centre of attention.
A	They will be a success.	**B**	They are not too concerned about success.
A	They are no better or worse than most people.	**B**	They think they am a special person.
A	They are not sure if they would make a good leader	**B**	They see themself as a good leader
A	They are assertive.	**B**	They wish they were more assertive
A	They like to have authority over other people.	**B**	They don't mind following orders
A	They find it easy to manipulate people.	**B**	They don't like it when they find themselves manipulating people.
A	They insist upon getting the respect that is due them	**B**	They usually get the respect that I deserve.
A	They don't particularly like to show off my body	**B**	They like to show off my body
A	They can read people like a book.	**B**	They find people are sometimes hard to understand.
A	If they feel competent, they are willing to take responsibility for making decisions.	**B**	They like to take responsibility for making decisions.
A	They just want to be reasonably happy	**B**	They want to amount to something in the eyes of the world.
A	They think their body is nothing special.	**B**	They like to look at my body.
A	They try not to be a show off.	**B**	They will usually show off if I get the chance.
A	They always know what I am doing.	**B**	Sometimes they are not sure of what they are doing.

A	They sometimes depend on people to get things done.	**B**	They rarely depend on anyone else to get things done
A	Sometimes they tell good stories	**B**	Everybody likes to hear their stories.
A	They expect a great deal from other people	**B**	They like to do things for other people.
A	They will never be satisfied until I get all that I deserve.	**B**	They take my satisfactions as they come.
A	Compliments embarrass them.	**B**	They like to be complimented
A	They have a strong will to power.	**B**	Power for its own sake doesn't interest them
A	They don't care about new fads and fashions.	**B**	They like to start new fads and fashions.
A	They like to look at myself in the mirror.	**B**	They are not particularly interested in looking at themselves in the mirror.
A	They really like to be the centre of attention.	**B**	It makes them uncomfortable to be the centre of attention.
A	They live their life the way they want to.	**B**	They can't always live their lives in terms of what they want.
A	Being an authority doesn't mean that much to them.	**B**	People always seem to recognize their authority.
A	They would prefer to be a leader.	**B**	It makes little difference to them whether they are a leader or not.
A	They think they are going to be a great person.	**B**	They hope they am going to be successful.
A	People sometimes believe what they tell them	**B**	They can make anybody believe anything they want them to.
A	They think they are a born leader.	**B**	Leadership is a quality that takes a long time for them to develop.
A	They wish somebody would someday write their biography.	**B**	They don't like people to pry into their life for any reason.
A	They get upset when people don't notice how they look when they go out in public.	**B**	They don't mind blending into the crowd when they go out in public.
A	They are more capable than other people	**B**	There is a lot that they can learn from other people.
A	They are much like everybody else	**B**	They think they are an extraordinary person.

C.6: Narcissistic Admiration and Rivalry Questionnaire

	No at all					Agree completely
I am great.	1	2	3	4	5	6
I will someday be famous.	1	2	3	4	5	6
I show others how special I am.	1	2	3	4	5	6
I react annoyed if another person steals the show from me.	1	2	3	4	5	6
I enjoy my successes very much.	1	2	3	4	5	6
I secretly take pleasure in the failure of my rivals	1	2	3	4	5	6
Most of the time I am able to draw people's attention to myself in conversations	1	2	3	4	5	6
I deserve to be seen as a great personality	1	2	3	4	5	6
I want my rivals to fail.	1	2	3	4	5	6
I enjoy it when another person is inferior to me.	1	2	3	4	5	6
I often get annoyed when I am criticized.	1	2	3	4	5	6
I can barely stand it if another person is at the centre of events.	1	2	3	4	5	6
Most people won't achieve anything.	1	2	3	4	5	6
Other people are worth nothing.	1	2	3	4	5	6
Being a very special person gives me a lot of strength.	1	2	3	4	5	6
I manage to be the centre of attention with my outstanding contributions.	1	2	3	4	5	6
Most people are somehow losers.	1	2	3	4	5	6
Mostly, I am very adept at dealing with other people	1	2	3	4	5	6

C.7: Hyposensitive Narcissism Scale

	Very uncharacteristic or untrue, strongly disagree	Uncharacteristic	Neutral	Characteristic	Very characteristic or true, strongly agree
I can become entirely absorbed in thinking about my personal affairs, my health, my cares, or my relations to others.	1	2	3	4	5
My feelings are easily hurt by ridicule or the slighting remarks of others.	1	2	3	4	5
When I enter a room, I often become self-conscious and feel that the eyes of others are upon me.	1	2	3	4	5
I dislike sharing the credit of an achievement with others.	1	2	3	4	5
I feel that I have enough on my hands without worrying about other people's troubles.	1	2	3	4	5
I feel that I am temperamentally different from most people.	1	2	3	4	5
I often interpret the remarks of others in a personal way.	1	2	3	4	5
I easily become wrapped up in my own interests and forget the existence of others.	1	2	3	4	5
I dislike being with a group unless I know that I am appreciated by at least one of those present.	1	2	3	4	5
I am secretly "put out" or annoyed when other people come to me with their troubles, asking me for my time and sympathy	1	2	3	4	5