COMMUNICATION AND HIGH QUALITY COACH-ATHLETE RELATIONSHIP: THE MODERATING ROLE OF ATHLETE ATTACHMENT

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Abstract

This cross-sectional study presented two aims: 1) to examine whether associations could be found between athletes’ use of communication strategies conflict management, openness and support, and athletes’ perceptions of coach-athlete relationship quality, and 2) to examine whether athletes’ attachment style (secure, anxious-ambivalent or avoidant) would act as a moderator for this association. A sample of 396 athletes (males = 183, females = 210) whose age ranged from 15 to 60 years (mean age = 19.17, SD = 4.59 years). The sample was recruited from a variety of both individual and team sports. In order to participate, athletes responded a questionnaire, online or in paper version. Statistical analyses were performed in IBM SPSS 24 and Amos 24, and by using Structural Equation Modelling (SEM). The results confirmed associations between athletes’ use of the selected communication strategies and their perceptions of the coach-athlete relationship quality. Regarding moderating effects, athletes’ attachment style was shown to have a significant moderation effect on a majority of the found associations. Suggestions for future research is to examine more of the communication strategies presented in the COMPASS model, in order to strengthen the model’s practical use. Also, longitudinal studies would complement these findings, as well as qualitative research for a deepened understanding of the communication strategies.

Keywords: coach-athlete relationship, communication strategies, COMPASS, 3Cs+1C, attachment, sports psychology

Abstrakt


Nyckelord: tränar-idrottare-relationen, kommunikationsstrategier, COMPASS, 3Cs+1C, anknytningssteori, idrottspsykologi
Small children are adventurers every time they leave their safe haven to explore the surrounding world. When they feel secure, they hardly stop, but when they face something new and potentially scary, they slow down and turn their eyes back at the caregiver – what now? The same wondering look can be seen in the world of sports. In the track and field world championships in 2003, after two fouls and with only one jump left to go, the Swedish heptathlon athlete Carolina Klüft looked at her coach Agne Bergvall with that exact same look. What now? When facing a potential obstacle, the first person that athletes turn to for advice, is often their coach (Felton & Jowett, 2014).

The coach-athlete relationship can be described as a relationship where both members need each other to reach their shared goals within their sports (Jowett & Shanmugam, 2016). At the arena, this interdependency is easily observed, and illustrated by numerous famous coach-athlete duos. For example, the coach-athlete relationship of the American swimmer Michael Phelps and his coach Robert “Bob” Bowman, has been described as “unbreakable”. Bowman entered Phelps’ life when Phelps was eleven years old, and at that period of athleticism, Phelps had a hard time focusing and planning his life. Under Bowman’s coaching and support, Phelps became the youngest American Olympian by the age of 15 and Bowman himself a successful coach, thanks to his athlete’s achievements. Phelps’ and Bowman’s interdependency depicts how the coach, as well as the athlete, have a mutual impact on their common interaction, and influence one another to experience good versus poor outcomes (Rusbult, Kumashiro, Coolsen & Kirchner, 2004).

Interdependence theory

Interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959) is a conceptualization of interpersonal relationships that focuses on interpersonal processes. According to Jowett (2005), interdependence is fundamental to the coach-athlete relationship for many reasons. Firstly, interdependence shapes the self. For example, when a young athlete interacts with a coach who is dominant and controlling, the athlete is likely to adopt a submissive attitude and behavior (Jowett, 2005). Another example is the athlete who improves a lot during a short amount of time, and whose coach is likely to believe that he or she is a successful coach. Secondly, interdependence shapes mental events. For example, athletes develop certain perceptions (e.g., “I am competent”) that reflect their attempts to understand the meaning of interdependence situations (e.g., “My coach has asked me to try a more difficult routine”). These perceptions help athletes to identify appropriate action in such situations (e.g., “I will give it a try”). From a coaching perspective, one example could be that coaches are less likely to increase the intensity of the training when they know from previous interactions that the athlete is not ready for it. Thirdly, interdependence shapes interaction. Interaction can take various forms (Thibaut &
Kelley, 1959). Some activities are independent, such as when the coach prepares the equipment while the athlete is warming up. Others are shared, as when the coach and the athlete exchange information during a training session. Interaction outcomes are essential elements of interdependence theory, and can be defined as rewards as well as costs. Rewards refer to positive consequences of interaction (e.g., satisfaction, motivation, success), whereas costs refer to negative consequences of interaction (e.g., conflict, power struggles, frustration). When determining whether a consequence of coaching is positive or negative, the quality of the relationship is a key factor (Jowett, 2017).

**Relationship quality: The 3+1Cs model**

The coach-athlete relationship has been conceptualized as a situation in which coaches’ and athletes’ feelings, thoughts, and behaviors are interdependent (Jowett, 2017). A coach-athlete dyad is considered interdependent if a coach and an athlete experience high levels of trust and respect; wish to remain attached and committed to each other in the future; and behave in a responsive, friendly, and easygoing manner (Jowett & Lavallee, 2007). In contrast, a coach-athlete dyad is less interdependent if a coach and an athlete experience lack of mutual respect and trust, lack of interest in maintaining the relationship over time, and/or lack of cooperative interaction in the sport field. In line with this definition, Jowett and colleagues operationalized athletes’ and coaches’ feelings, thoughts and behaviors within their 3+1Cs model as a reflection of the quality of a coach-athlete relationship. The 3+1Cs model reflects the degree to which coaches and athletes are interdependent in terms of closeness, commitment, complementarity and co-orientation. Closeness refers to the affective quality of interpersonal feelings, such as respect, liking, trust and appreciation for each other. Commitment refers to the interpersonal thoughts that exist between the coach and the athlete, and postulates a long-term commitment to the relationship. This bond is considered important since the athletes’ development and potential success often requires a long-term co-operation. Complementarity reflects the interpersonal behaviours and the cooperation of the coach and athlete, including both reciprocal complementarity and corresponding complementarity. For instance, complementarity behaviour is reflected in how both the coach and the athlete are showing an positive attitude to one another during training (Jowett & Lavallee, 2007).

The model takes into account athletes’ and coaches’ perceptions of closeness, commitment and complementarity from both from a direct and a meta perspective. The direct perspective demonstrates one relationship member’s perception of the three Cs relevant to the other member (e.g., “I trust my coach”), while the meta-perspective aims to assess the degree to which one relationship member can accurately infer the other member’s perception of the three Cs (e.g., “My coach trusts me”). The degree to which the athletes’ and the coaches’ perceptions are interconnected is represented by the “+1C”, co-orientation. The construct of co-orientation is an essential indicator of the quality of the coach-athlete relationship, since it facilitates the coordination of the relationship members’
actions in the accomplishment of common goals. In reverse, if there is lack of co-orientation, both members will likely have difficulties making accurate inferences about the other’s behaviours. This can often be an indicator of too little and/or inadequate communication. (Jowett & Lavallee, 2007). Communication is another key factor within the coach-athlete relationship, and act as fuel for the relationship quality. (Davis, Jowett & Tafvelin, 2018)

**Communication strategies: The COMPASS model**

Rhind and Jowett developed the COMPASS model as a means of presenting strategies that coaches and athletes can use to develop and maintain close, committed and complementary relationships (Rhind & Jowett, 2008; 2010; Rhind, Jowett & Yang, 2012). The model displays 7 key communication strategies: conflict management (e.g., coaches’ and athletes’ efforts to discuss and resolve potential areas of disagreement), openness (e.g., efforts to engage in open lines of communication), motivation (e.g., efforts from both parties to make a partnership that is rewarding, active, ambitious, and energetic), assurance (e.g., making sacrifices that will assist the relationship to be functional and successful), preventative (e.g., efforts to discuss expectations, rules and roles), support (e.g., helping one another through difficult times) and social networks (e.g., creating opportunities to develop strong bonds with others to improve the relationship between coach and the athlete).

To date, only two published studies have examined the COMPASS model in regard to relationship quality (Rhind & Jowett, 2011; 2012). In one of them, Rhind and Jowett (2011) found significant associations between coaches’ and athletes’ perceptions of closeness and their use of openness and social networks strategies. They also found associations between commitment and the use of motivational and support strategies, and between complementarity and the use of preventative strategies. This was valid for both coaches and athletes, including the direct perspective of relationship quality as well as the meta perspective. Some of the communication strategies were significant predictors for relationship quality from a coach’s point of view, but not from an athlete’s. For example, conflict management significantly predicted coaches’ direct and meta perceptions of complementarity within the relationship (i.e., coaches who used higher levels of conflict management were more likely to perceive higher levels of complementarity). For athletes, however, the use of conflict management did not predict their perceptions of relationship quality. The assurance strategy was also more strongly associated with coaches’ perceptions of relationship quality, where the use of the strategy positively predicted coaches’ direct and meta perceptions of both commitment and complementarity. As with conflict management, the use of assurance strategy did not predict the athletes’ perceptions of relationship quality. Another difference between coaches and athletes was found in support strategies, where athletes tended to give more support when they perceived their coach to feel close to them. This was a contrast to the coaches, who gave more support when they viewed themselves as having lower levels of closeness, or when
they perceived that their athlete felt close to them. Altogether, these results confirm that coaches’ and athletes’ use of communication strategies is associated with their perceptions of relationship quality. Nonetheless, this research has its cultural limits, when it has only been conducted in the United Kingdom. This is also the case for the research carried out by Rhind and Jowett (2012) in order to statistically examine the reliability and validity of the COMPASS model. In this study, the authors concluded that the use of communication strategies within the coach-athlete relationship might play a central role in ensuring that the athlete’s perceptions are understood by the coach.

In a study by Davis, Jowett and Tafvelin (2018, currently under review) three of the the COMPASS strategies (conflict management, support strategies and motivational strategies) were examined in regard to relationship quality, and whether they had a mediating role on the association between athletes’ perceived relationship quality and sport satisfaction. Sport satisfaction was divided into three dimensions: satisfaction with performance, satisfaction with personal treatment and satisfaction with training and instruction. For the direct perspective of relationship quality, the results showed evidence for support as a mediator, which showed indirect effects on all three dimensions of sport satisfaction. Motivational was found as a mediator for one dimension (satisfaction with individual performance) and finally conflict management was non significant. For the meta perspective of relationship quality, once again there was significant results on the communication strategies support and motivational but not for conflict management. With the difference that motivational was a mediator for two dimensions of sport satisfaction (satisfaction with performance and satisfaction with training and instruction). Hence, the results of the study showed that support had a central role in sport satisfaction, explained by its function to provide help, value and care for each other. For motivational, it was assumed the athletes who are motivated and bond with their coach, are more likely to also be successful and satisfied with performance. The authors also discuss the non significant results of conflict management as a mediator, that a good coach-athlete relationship quality may not call upon the utilisation of conflict management strategies (Davis, Jowett & Tafvelin, 2018).

Altogether, these findings confirm associations between relationship quality and the communication strategies presented in the COMPASS model. However, the studies published to date are few, which makes it relevant to further examine the model to strengthen its validity. The results also emphasize interpersonal skills as a key element of coaching effectiveness, and suggest that individual factors may have impact on the strategies that coaches and athletes engage in. This motivates to further examine how coaches’ and athletes’ individual personality factors have impact upon their communication strategies. This has also been proposed in Jowett’s and Poczwardowski’s (2007) integrated research model.
Relationship quality and communication in interaction: The integrated research model

In their integrated research model (see Figure 1.1), Jowett and Poczwardowski (2007) conceptualize the interaction between – among others – individual factors, relationship quality and communication. The model displays three interrelated layers of coach-athlete relationship. First layer includes the athletes’ and coaches’ individual difference variables (such as age, gender and personality), the wider social-cultural context they are in (including e.g., culturally defined norms, roles, rules, customs, expectations, values) and the relationship’s characteristics (e.g., relationship type, duration). These antecedents have an impact on the second layer, the relationship quality, which contains the relational components as described by the 3Cs; the coaches’ and athletes’ feelings (closeness), thoughts (commitment) and behaviours (complementarity) towards each other. The third layer displays the intrapersonal outcomes (e.g., satisfaction of training and sport performance, emotions during training and health), the interpersonal outcomes (e.g., interpersonal satisfaction and conflict) and outcomes on a group level that are affected by the quality of the coach-athlete relationship. For instance, research has showed positive associations between relationship quality and relationship satisfaction (Davis, Jowett & Lafranière, 2014; Jowett & Ntoumanis, 2004), team cohesion (Jowett & Chaundy, 2004), and subjective performance (Rhind & Jowett, 2011), amongst others. In reverse, research has highlighted negative outcomes associated with poor quality coach-athlete relationships, including interpersonal conflict (Wachsmuth, Jowett, & Harwood, 2018) and athlete burnout (Appleby, Davis, Davis & Gustafsson, 2018; Isoard-Gautheur, Guillet-Descas & Gustafsson, 2016).

The integrated research model depicts the role of interpersonal communication as a bridge between all three layers and its reciprocal relationship with relationship quality. Moreover, communication (verbal and nonverbal, intended and intended, honest or dishonest) fuels the quality of the coach-athlete relationship, which in turn affects the quantity and quality of communication. The quantity and quality of communication regulates the distance between the coach and the athlete, which can either bring them close to, or distant from each other. Thus, communication is key in building stable and high quality coach-athlete relationships. (Jowett & Poczwardowski, 2007).

The model also emphasizes the merit in examining the impact of coaches’ and athletes’ individual personality factors in order to understand their communication strategies, and consequently the quality of their relationship. (Jowett & Poczwardowski, 2007). In this study, the individual factor is represented by athletes’ attachment style.
Attachment theory

Bowlby’s attachment theory (1969/1982) describes the infant’s innate ability to form emotional bonds to a significant other (usually, the parent). Ainsworth (1979) noticed individual differences in how the attachment system is activated, as in how children feel, think and behave towards the caregiver when there is threat or distress. These differences are referred to as attachment styles, or a relational form of personality. Attachment styles can be divided into three types: secure, anxious-ambivalent and avoidant. According to the theory, it is the caregiver’s behaviours that set the foundation for the child’s attachment style. Here, the most crucial situations are when the child is distressed or upset. The way the caregiver takes care of the child in these situations established what is called internal working models, which serve as the child’s first internal representations of other people. The internal working models will affect the child’s perceptions of others and what to expect from them, as well as how the child perceives himself/herself (e.g., a child that is seldom taken care of when upset, is more likely to develop an inner working model of himself/herself as unworthy of love, and an insecure attachment). (Ainsworth, 1979).
A secure attachment is characterized by a consistent environment where the caregiver is responsive and supportive to the child’s signals and interpret and meet the its needs (e.g., provides reassurance in stressful situations). The anxious-ambivalent attachment style is characterized by an inconsistent environment where the caregiver is sometimes provides responsiveness and support to the child’s signals of threat and/or distress, and sometimes not. The avoidant attachment style is developed when the child’s proximity-seeking consistently is met with rejection. Thus, the child is taught that the attachment figure will not meet their call for comfort and proximity, and develop internal working models of themselves as not worthy of love and support.

Attachment style also has impact on the ability to regulate emotions. In order to develop an effective and functioning affect regulation, children require their attachment figure to verbalise their feelings and calm them in times of need and stress. In situations where a small child experiences strong emotions but is not reassured or guided by his/hers attachment figure, it is hard for him/her to interpret and verbalise the strong emotions by himself/herself. In such situations, the “message” for the child is that there is no help to get. This might lead to dysfunctional communication strategies where feelings and needs are either entirely suppressed or, on the contrary, expressed without regard for others. (Ainsworth, 1979; Gerhardt, 2004).

Difficulties in affection regulation may remain into adulthood, with poorer communication and relationship problems as a result (Mikulincer & Shaver, 2007; Cassidy & Shaver, 2008). However, the attachment style that is developed with the primary close caregiver during childhood does not have to be the same through all relationships across the lifespan. As individuals enter into adolescence and adulthood, other significant relationships (e.g., romantic partners, close friends, teachers, therapists or sport coaches) can serve attachment related functions as well. These functions include 1) proximity maintenance, 2) safe haven and 3) secure base. Proximity maintenance refers to the attached persons need of maintaining and seeking proximity to the attachment figure. Safe haven refers to the role of the attachment figure have in difficult times when functions will be providing consolation and security to the attached person. Secure base refers to when the attachment figure supports and acts as a secure base to go back to, allowing the attached person to explore activities outside the relationship. (Bowlby, 1979; Hazan & Shaver, 1987).

Bowlby’s description of an attachment figure (1979) might be applied in the world of sports as well. Here, the coach can be viewed as a possible relational context-specific attachment figure for the athletes to seek proximity to and rely on in times of need, and a secure base allowing athletes’ exploration and self growth. (Jowett & Cockerill, 2003; Davis & Jowett, 2010; Shaver & Mikulincer, 2008). Also, the coach’s role as a “wise leader” in supporting, guiding and developing athletes’ self-worth and self-confidence, is closely related to the role of an attachment figure (Côté & Fraser-Thomas, 2007; Davis & Jowett, 2010).

Recent research, examining the applications of Bowlby’s (1969/1982) attachment theory in sports psychology, suggests that athletes’ secure and avoidant attachment style
can predict their perception of relationship satisfaction and sport satisfaction (Davis & Jowett, 2014; Davis, Jowett & Lafrenière, 2013). According to these results, athletes who experienced less insecurity were more likely to experience a greater level of relationship quality (Davis, Jowett & Lafrenière, 2014). In contrast, athletes with avoidant attachment style were the most likely to feel dissatisfied in their relationship to the coach (Davis & Jowett, 2014). These athletes’ dissatisfaction had a partner effect, (i.e., was reflected in the coaches’ view of the relationship quality) (Davis, Jowett & Lafrenière, 2014). Coaches’ perception of relationship dissatisfaction hindered their ability to develop and support the athlete, and negatively affected the development of closeness in the coach-athlete relationship (Davis & Jowett, 2010; Davis et al., 2013). Anxious-ambivalent attachment style was not a significant predictor of relationship quality (Davis & Jowett, 2010). However, earlier research has noted negative associations between relationship satisfaction and both insecure attachment styles in athletes (Mikulincer and Shaver, 2007).

Furthermore, Davis and Jowett (2013b; 2014) suggested athletes’ attachment style to be associated with how they handled interpersonal conflicts within the coach-athlete relationship, and how easily the coach and the athlete developed high quality coach-athlete bonds. Again, athletes with avoidant attachment style were less likely to experience conflict with their coach, as a result of their preference for emotional distance and independency (Davis & Jowett, 2013b; 2014). In accordance with this, it has been stated that the avoidant attachment style negatively affects the ability to rely on others. For athletes with avoidant attachment, this might crash with the interdependent process of sport coaching and make it harder for them to collaborate and set common goals with their coaches. Consequently, the avoidant attachment seems to have an interrupting impact on the coach-athlete interaction. (Jackson, Dimmock, Gucciardi & Grove, 2011). This has also been supported in previous research (Mikulincer & Shaver, 2007), concluding that individuals with avoidant attachment style tend to see conflict as a threat to their autonomy, and therefore deal with it by avoiding interaction cognitively or emotionally, or by minimizing the importance of either the conflict or the other person’s needs. Behind this notion there is a reluctance to express emotional needs and showing vulnerability, which makes conflict threatening for the individual with avoidant attachment.

For individuals with anxious-ambivalent attachment, on the other hand, conflict implies a threat to their wish to gain approval, support and security. Thus, they are likely react to conflicts with fear, and their communication strategies will more often result in domination or submission. Subsequently, both insecure attachment styles are associated with less effective conflict management strategies, poorer skills to take others’ perspective and, by so, a tendency to either intensify or withdraw conflicts. (Mikulincer & Shaver, 2007).

Research about secure attached individuals has found that they, to a higher degree, trust their capacity to handle conflicts in a effective way, and therefore tend to express themselves in a constructive and non threatening way during conflict situations. This open and constructive approach to conflicts help them to use effective conflict management, and take both their own and another person’s perspective. Research has also showed
strong associations between secure attachment and the ability to affect regulation. (Mikulincer & Shaver, 2007).

The present study

Whilst research has been conducted on relationship quality and attachment, and relationship quality and communication, the two roles have not yet been examined together. In this study, communication will be represented by three of the strategies presented in the COMPASS model: conflict management, openness and support. These were selected for investigation based on previous research on relationship quality, where openness strategies were associated with athletes’ perceptions of closeness and complementarity to their coach, and support strategies were associated with perceptions of commitment and complementarity. Conflict management was selected as third communication strategy, despite the fact that it had not been significantly associated with athletes’ perception of relationship quality (Rhind & Jowett, 2011; Davis, Jowett & Tafvelin, 2018). However, since mentioned previous research has not taken athletes’ attachment style into account when examining the associations between communication and relationship quality, and since findings in current sport psychology propose that there are personality considerations that impact upon communication, conflict management was considered relevant to examine further. Also, attachment research has shown that conflict management differ between individuals with secure and insecure attachment style. (Davis & Jowett, 2013b; 2014; Mikulincer & Shaver, 2007).

Guided by the integrated research model, one would expect that attachment, as an individual factor in the first layer, is likely to have impact on the interpersonal communication between the layers, and consequently affect the relationship quality in the second layer. In line with this, this study presents two research aims:

1. Examine whether communication strategies conflict management, openness and support (presented in the COMPASS model) have an impact upon athletes’ perceptions of the quality of the coach-athlete relationship (the 3Cs+1 Model).

**Hypothesis 1.** There will be a positive association between athletes’ use of the communication strategies conflict management, openness and support, and their perceptions of direct and meta relationship quality, i.e. athletes who engage in communication strategies (COMPASS) will perceive a good relationship quality (3C+1).

2. Examine whether coach-athlete attachment style (secure, anxious-ambivalent, avoidant) acts as a moderating factor between perceived communication and the quality of the coach-athlete relationship.
**Hypothesis 2.** The secure attachment style will positively moderate the association between the use of the communication strategies conflict management, openness and support and relationship quality (the 3Cs model meta and direct perspective).

**Hypothesis 3.** The avoidant and the anxious-ambivalent attachment styles will negatively moderate the association between the use of the communication strategies conflict management, openness and support and relationship quality. (See figure 1.1.)

Figure 1.2

*Theoretical framework.*

Method

Participants

A total of 396 athletes, including 183 males (46.2 %), 210 females (53.0 %) and 3 athletes who did not report their gender (.8 %), participated in this study. The athletes’ age ranged from 15 to 60, with a mean age of 19.17 (SD = 4.59). The participants were recruited from a wide range of individual sports (e.g., track and field, cross-country skiing, golf, and swimming) and team sports (e.g., football, floorball, gymnastics and basketball). 197 of the athletes (49.7 %) participated in individual sports, and 198 athletes (50.3 %) participated in team sports. The participants represented different levels of sport
performance, ranging from regional (24.6 %) to national (48.1 %), and international level (26.3 %). Athletes’ reported years of participation within their sport ranged from 0 to 55 years, with a mean of 11.00 years (SD = 5.16). The relationship length with their current coach ranged from 0 to 15 years, with a mean of 2.52 years (SD = 2.70). The number of hours spent with their coach on a weekly basis ranged from 0 to 30 hours, with a mean of 8.28 (SD = 5.83). 361 (91.2 %) of the participants reported a male coach, and 34 (8.6 %) of them reported a female coach.

Measurements

The current study employed a multi-section questionnaire that included the following:

**Demographic information.** Respondents provided demographic information about their age, gender, primary sport and the length they had been involved in their sport. They also provided information about their coach-athlete relationship, such as the length of the relationship, the coach’s gender, highest level of participation and the amount of time that they spend training with their coach each week.

**Coach-Athlete Attachment Style (CAAS: Davis & Jowett, 2013).** To measure participants’ attachment style towards their sports coach, the Coach-Athlete Attachment Scale was employed. The CAAS is a self-report questionnaire designed to measure secure and insecure attachment styles in sports and specifically attachment towards the sports coach. It consists of 19 items, of which 5 measure a secure attachment style (e.g., “I know I can rely on my coach”), 7 items measure athletes’ avoidant attachment style (e.g., “I do not turn to my coach for reassurance”), and 7 items measure athletes’ anxious-ambivalent attachment (e.g., “I worry that I won’t fulfil my coach’s expectations”). Participants indicated the extent to which they agree with each statement on a 7-point likert scale from 1, “strongly disagree”, to 7, “strongly agree”.

Previous research has shown supportive evidence for the validity of the instrument. Cronbach’s alpha indicated good internal consistency (secure attachment $\alpha = .86$, avoidant attachment $\alpha = .86$, anxious-ambivalent attachment $\alpha = .82$) (Davis & Jowett, 2013). In the present study, reliability properties were obtained for the three attachment styles (secure attachment $\alpha = .89$, avoidant attachment $\alpha = .88$, anxious-ambivalent attachment $\alpha = .88$).

**Coach-Athlete Relationship Maintenance Strategies (CARM-Q: Rhind & Jowett, 2012).** To measure participants’ perception of their coach-athlete communication style, the Coach-Athlete Relationship Maintenance Questionnaire was employed. The CARM-Q is a self-report questionnaire based on Rhind’s and Jowett’s COMPASS model, measuring participants’ use of seven relationship communication strategies: conflict management (e.g., “I am understanding during disagreements”), openness (e.g., “I am open about my feelings”), motivational (e.g., “I show that I am motivated to work hard with my coach/athlete”), preventative (e.g., “I show my coach/athlete what I expect from her/him”), assurance (e.g., “I show my coach/athlete support when things are not going well”), and social networks (e.g., “I like to spend time with our mutual friends”). In total,
the CARM-Q contains 28 items, of which 5 items assess conflict management; 5 items assess motivational strategies; and 3 items assess support. Respondents indicated their agreement with the items on a 7-point likert scale from 1, “strongly disagree”e, to 7, “strongly agree”. The instrument has shown satisfactory validity. Evidence of good internal consistency has been provided through Cronbach’s alpha for each of the CARM-Q sub-scales (conflict management $\alpha = .86$, openness $\alpha = .83$, motivational $\alpha = .88$, preventative $\alpha = .86$; assurance $\alpha = .82$, support $\alpha = .79$, social networks $\alpha = .80$). (Rhind and Jowett, 2012). For the current study, reliability properties were measured for three sub-scales (conflict management $\alpha = .80$, openness $\alpha = .78$, support $\alpha = .88$).

**Coach-Athlete Relationship Quality (Coach-Athlete Relationship Quality, CART-Q: Jowett & Ntoumanis, 2004).** The Coach-Athlete Relationship Questionnaire is a self-report instrument that examines the nature of the coach-athlete relationship quality by measuring coaches’ and athletes’ direct and meta perceptions of closeness, commitment and complementarity in. 11 of the 22 items measure relationship quality from a direct perspective, and 11 of them measure relationship quality from a meta perspective. 8 items measure closeness (e.g., “I trust my coach”), 6 items measure commitment (e.g., “I am committed to my coach/athlete”) and 8 items measure complementarity (e.g., “When I am coached/when I coach my athlete, I am responsive to this/her efforts”). Participants indicated the extent to which they agree with each statement on a 7-point likert scale from 1, “strongly disagree”, to 7, “strongly agree”.

In validation of the CART-Q by Rhind and Jowett (2010), satisfactory psychometric properties regarding validity and reliability were reported. Cronbach’s alpha indicated good internal consistency (direct perspective ($\alpha = .94$) and meta perspective ($\alpha = .95$, direct-closeness $\alpha = .92$, direct-commitment $\alpha = .94$, direct-complementarity $\alpha = .94$, meta-closeness $\alpha = .91$, meta-commitment $\alpha = .92$, meta-complementarity $\alpha = .94$).

For the purpose of this study the CAAS, the CARM-Q and the CART-Q were translated into Swedish in order to match the Swedish sample of athletes. This was implemented through a parallel back-translation process, where two duos of two native speakers separately translated the items from English to Swedish and then compared translations between them. When comparing, another native Swedish speaker who had not been part of the two pairs’ translations was consulted as well, and a common translation was agreed between him and them. Present when comparing was also a native English speaker, who could confirm whether the back-translations corresponded with the original English items. The process of back-translation was conducted in order to ensure the most accurate translation, where both cultural and conceptual aspects where taking into account. For example, the English word “disagreements” was translated to “när vi inte håller med varandra” (literally, “when we do not agree with each other”). The Swedish word “meningsskiljaktigheter” was considered equivalent to “disagreements” from a linguistic point of view, but not as commonly used in everyday life as the Swedish version of “when we do not agree with each other”, especially not by youths. These sorts of balances were discussed in the last phase of the back-translation process, before putting together the final
translation. Based on the Swedish translations of the CAAS, the CARM-Q and the CART-Q a questionnaire was created. The questionnaire was also transformed into an online version, containing the same questions.

**Procedure**

Prior to data collection, ethical approval was granted by the supervisor’s institution, following the guidelines of the Declaration of Helsinki (2001). Potential participants, such as sports clubs, teams and coaches were first contacted by phone or email to take part in the study. They were informed of both the nature of the study and the voluntary nature of participation. Thereafter, two different recruitment strategies were used. For participants in the Umeå area, a time and date were set for a visit, where the questionnaire was distributed prior to a training session, by the authors of this thesis. Participants were guaranteed anonymity and confidentiality. Hence, no personal information was recruited. Participants were asked to provide a unique code that they could use if they wanted to withdraw from the study. Also, they were informed about the right to abort their participation until the date of analysis. After obtaining informed consent athletes were administered the questionnaire. They were asked to answer all questions independently from their coach and their peers, and to turn to the authors if they had any queries regarding the questions. Completion of the questionnaire lasted no longer than 30 minutes. Participants who did not meet the inclusion criteria regarding age and being a competing athlete were excluded. Participants who were considered not to have a sufficient level of Swedish language were also excluded. This was the case for two participants, whose questionnaires were removed afterwards.

Secondly, sports clubs, teams and coaches outside of Umeå were sent information on the nature of the study and instructions on how to complete the web questionnaire by email, alongside a link to the online questionnaire. The link was sent forward from the coaches to their athletes. After obtaining informed consent the athletes were administered the online questionnaire. Participants were asked to contact the authors if they had any specific queries regarding the questions. Data was collected for a period of four weeks.

**Data Analysis**

The required statistical analyses were performed with IBM SPSS 24 and Amos 24, using the maximum likelihood method. Firstly, descriptive statistics were performed on all of the main variables of the study. Secondly, structural equation modelling (SEM) was used to assess the relationship between relationship quality (closeness, commitment and complementarity) and communication strategies (conflict management, openness and support). Thirdly, SEM was used to examine whether the participants’ attachment styles had a moderating effect on the relationship between relationship quality and communication strategies. In order to measure how each of the three communication strategies was associated with relationship quality (direct effects) and the moderating
effect of attachment styles, moderating variables were computed and tested, using standardized $\beta$ and unstandardized $B$. Three standardized fit indices were used to evaluate the model: Bentler’s comparative fit index (CFI), the root-mean-square error of approximation (RMSEA), and chi-square divided by the degrees of freedom. Cut-off criteria for CFI were based on recommendations made by Hu and Bentler (1995), saying that a CFI value of .90 or more indicates good model fit. For RMSEA, values less than .08 count as good model fit (Hu & Bentler, 1995; Browne & Cudeck, 1992). For normed chi-square values, the upper thresholds for good data fit differs between 2.0 (Tabachnick & Fidell, 2007) and 5.0 (Wheaton, Muthen, Alwin & Summers, 1977) in the literature.

Results

Descriptive statistics

Table 1 presents descriptive data of means, standard deviations and alpha coefficients of all variables under investigation. Athletes, on average, reported relatively high levels of secure attachment, low to moderate levels of avoidant attachment and low levels of anxious-ambivalent attachment. Moreover, athletes reported relatively high levels of relationship quality via the 3Cs (closeness, commitment and complementarity), for both the direct and the meta perspective of relationship quality. Regarding communication strategies, athletes reported high levels of conflict management and moderate to high levels of openness and support. Cronbach’s alpha provided support for the reliability of all measures included in this study, ranging from .78 to .95 (see Table 1). According to EFPA criterions (2013), Cronbach’s alpha scores attained an adequate to excellent internal consistency.

Table 1

<table>
<thead>
<tr>
<th>Athlete variables</th>
<th>$M$</th>
<th>$SD$</th>
<th>$\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>5.28</td>
<td>1.42</td>
<td>0.89</td>
</tr>
<tr>
<td>Avoidant</td>
<td>3.54</td>
<td>1.45</td>
<td>0.88</td>
</tr>
<tr>
<td>Anxious-ambivalent</td>
<td>2.01</td>
<td>1.16</td>
<td>0.88</td>
</tr>
<tr>
<td>Closeness</td>
<td>5.83</td>
<td>1.22</td>
<td>0.94</td>
</tr>
<tr>
<td>Commitment</td>
<td>4.87</td>
<td>1.19</td>
<td>0.86</td>
</tr>
<tr>
<td>Complementarity</td>
<td>5.85</td>
<td>1.14</td>
<td>0.93</td>
</tr>
</tbody>
</table>
CART-Q direct 5.66  1.15  0.94
CART-Q meta  4.95  1.08  0.95
Conflict management  5.59  1.10  0.80
Openness  4.80  1.33  0.78
Support  4.35  1.64  0.88

Bivariate correlations for all investigated variables can be found in Table 2, showing significant associations between all three attachment styles and the communication strategies (conflict management, openness and support), and between relationship quality (closeness, commitment, complementarity) and between the direct perspective and meta perspective of relationship quality, separately.

Table 2

Bivariate correlations for all investigated main variables (N = 396).

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sec</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Av</td>
<td>-.51**</td>
<td>-</td>
<td>-.46**</td>
<td>.30**</td>
<td>-</td>
<td>-.78**</td>
<td>-</td>
<td>-.54**</td>
<td>-.43**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Anx</td>
<td>-.39**</td>
<td>-</td>
<td>-.11**</td>
<td>-</td>
<td>-</td>
<td>-.39**</td>
<td>-</td>
<td>-.54**</td>
<td>-.39**</td>
<td>.93**</td>
<td>.85**</td>
</tr>
<tr>
<td>4. Close</td>
<td>.71**</td>
<td>-.57**</td>
<td>-.38**</td>
<td>.82**</td>
<td>-</td>
<td>.72**</td>
<td>-.50**</td>
<td>-.44**</td>
<td>.91**</td>
<td>.79**</td>
<td>-</td>
</tr>
<tr>
<td>5. Commit</td>
<td>.74**</td>
<td>-.54**</td>
<td>-.39**</td>
<td>.93**</td>
<td>.85**</td>
<td>.92**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6. Comp</td>
<td>.76**</td>
<td>-.55**</td>
<td>-.45**</td>
<td>.92**</td>
<td>.89**</td>
<td>.92**</td>
<td>.84**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. CART-Q direct</td>
<td>.39**</td>
<td>-.23**</td>
<td>-.23**</td>
<td>.46**</td>
<td>.35**</td>
<td>.50**</td>
<td>.44**</td>
<td>.45**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8. CART-Q meta</td>
<td>.48**</td>
<td>-.48**</td>
<td>-.24**</td>
<td>.50**</td>
<td>.31**</td>
<td>.46**</td>
<td>.42**</td>
<td>.56**</td>
<td>.31**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9. CM</td>
<td>.44**</td>
<td>-.44**</td>
<td>-.11**</td>
<td>.46**</td>
<td>.52**</td>
<td>.40**</td>
<td>.45**</td>
<td>.47**</td>
<td>.23**</td>
<td>.54**</td>
<td>-</td>
</tr>
<tr>
<td>10. O</td>
<td>.48**</td>
<td>-.48**</td>
<td>-.24**</td>
<td>.50**</td>
<td>.31**</td>
<td>.46**</td>
<td>.42**</td>
<td>.56**</td>
<td>.31**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11. S</td>
<td>.44**</td>
<td>-.44**</td>
<td>-.11**</td>
<td>.46**</td>
<td>.52**</td>
<td>.40**</td>
<td>.45**</td>
<td>.47**</td>
<td>.23**</td>
<td>.54**</td>
<td>-</td>
</tr>
</tbody>
</table>

*p < .01, **P > .05, Sec = secure attachment style, Av = avoidant attachment style, Anx = anxious-ambivalent attachment style, Close = closeness, Commit = commitment, Comp = complementarity, CART Q Direct = relationship quality direct perspective, CART-Q meta = relationship quality meta perspective, CM = conflict management, O = openness, S = support

Structural Equation Model: Direct effects

The structural model indicated a satisfactory model fit (CFI = .928, RMSEA = .065, χ²/df = 2.679). According to Hu and Bentler (1995), a CFI of .90 or more, indicates good model fit. For RMSEA, values less than .08 count as good model fit (Hu & Bentler, 1995; Browne & Cudeck, 1992). For normed chi-square values, the upper thresholds differ between 2.0 (Tabachnick & Fidell, 2007) and 5.0 (Wheaton, Muthen, Alwin & Summers, 1977) in the literature. Consequently, the CFI, RMSEA and the normed chi-square values indicated a good model fit.
Athletes’ perceptions of relationship quality from a direct perspective were significantly predicted by their use of conflict management (standardized $\beta = .128$, S.E. = .040, $p < .001$) and support (standardized $\beta = .144$, S.E. = .166, $p < .001$). The use of openness strategies did not predict relationship quality from a direct perspective. Athletes’ perceptions of relationship quality from a meta perspective were significantly predicted by their use of the communication strategies conflict management (standardized $\beta = .182$, S.E. = .038, $p < .001$) and openness (standardized $\beta = .110$, S.E. = .043, $p = .005$). The use of support strategies did not predict relationship quality from a meta perspective.

Table 3

Regression weights of directs effects in the structural equation model with relationship quality as dependent variable (N = 396).

<table>
<thead>
<tr>
<th>CART-Q direct</th>
<th>$\beta$</th>
<th>$B$</th>
<th>S.E.</th>
<th>$P$.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM→ CART-Q direct</td>
<td>.128</td>
<td>.148</td>
<td>.040</td>
<td>***</td>
</tr>
<tr>
<td>O→ CART-Q direct</td>
<td>-.066</td>
<td>-.076</td>
<td>.046</td>
<td>.098</td>
</tr>
<tr>
<td>S→ CART-Q direct</td>
<td>.144</td>
<td>.166</td>
<td>.045</td>
<td>***</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CART-Q meta</th>
<th>$\beta$</th>
<th>$B$</th>
<th>S.E.</th>
<th>$P$.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM→ CART-Q meta</td>
<td>.182</td>
<td>.198</td>
<td>.038</td>
<td>***</td>
</tr>
<tr>
<td>O→ CART-Q meta</td>
<td>.110</td>
<td>.120</td>
<td>.043</td>
<td>.005</td>
</tr>
<tr>
<td>S→ CART-Q meta</td>
<td>.080</td>
<td>.087</td>
<td>.041</td>
<td>.034</td>
</tr>
</tbody>
</table>

*p < .01, **p < .05, ***p < .001, CART-Q direct = relationship quality direct perspective, CART-Q meta = relationship quality meta perspective, CM = conflict management, O = openness, S = support

Structural Equation Model: Moderating effects

The moderation analysis identified five values for the interaction between the relationship quality and the communication strategies, at which significant moderation of attachment style took place. For the direct perspective of relationship quality, athletes’ attachment style functioned as a moderator in three combinations. Firstly, secure attachment style moderated the association between relationship quality and conflict management (standardized $\beta = -.124$, S.E. = .040, $p = .002$) (Figure 1.3). Secondly, secure attachment style functioned as a moderator for the association between relationship quality and support (standardized $\beta = -.091$, S.E. = .050, $p = 0.47$). Thirdly, anxious-ambivalent
attachment style had a moderation effect on the association between relationship quality and conflict management (standardized $\beta = -.084$, S.E. = .038, $p = .021$) (Figure 1.4). In other words, the analysis indicated that athletes’ use of communication strategies of conflict management and support was associated with improvement of perceived direct relationship quality, when the athletes’ attachment style was secure. Athletes’ use of communication strategies conflict management and openness was associated with lower level of perceived meta relationship quality when the athletes’ attachment style was anxious-ambivalent. However, athletes’ avoidant attachment style had no moderation effect on the association between the relationship quality and conflict management, nor on the association between relationship quality and support.

For the meta perspective of relationship quality, athletes’ attachment style functioned as a moderator in two combinations. Firstly, secure attachment style moderated the association between relationship quality and conflict management (standardized $\beta = -120$, S.E. = .044, $p = .037$) (Figure 1.5). Secondly, the avoidant attachment style showed moderating effect for the relationship between relationship quality and openness (standardized $\beta = .090$, S.E. = .044, $p = .037$). Thus, the analysis indicated that athletes’ use of communication strategies conflict management and openness was associated with improvement of perceived meta relationship quality, when the athletes’ attachment style was secure. Athletes’ use of communication strategies conflict management and openness was associated with lower level of perceived meta relationship quality when the athletes’ attachment style was avoidant. However, athletes’ anxious-ambivalent attachment style had no moderation effect on the association between relationship quality and conflict management, nor on the association between relationship quality and openness.

Figures 1.3, 1.4 and 1.5 show three of the strongest moderating effects for athletes’ attachment style.

Table 4

| Regression weights of moderating effects in the structural equation model with relationship quality as dependent variable (N = 396). |
|-----------------------------------------------|---------|---------|---------|---------|
| CART-Q direct                              | $\beta$ | $B$    | $S.E.$ | $P$.    |
| CM (mod by secure) → CART-Q direct          | -.124   | -.123  | .040   | .002**  |
| CM (mod by avo) → CART-Q direct             | .018    | .021   | .043   | .628    |
| CM (mod by anx) → CART-Q direct             | -.084   | -.089  | .038   | .021*   |
| O (mod by secure) → CART-Q direct           | .070    | .077   | .052   | .144    |
| O (mod by avo) → CART-Q direct              | -.003   | -.003  | .047   | .941    |
| O (mod by anx) → CART-Q direct              | .060    | .064   | .045   | .160    |
S (mod by secure) → CART-Q direct  
\[-.091 \quad -.100 \quad .050 \quad .047^*
\]
S (mod by avo) → CART-Q direct  
\[.084 \quad .091 \quad .047 \quad .056\]
S (mod by anx) → CART-Q direct  
\[.039 \quad .045 \quad .049 \quad .358\]

<table>
<thead>
<tr>
<th>CART-Q meta</th>
<th>(\beta)</th>
<th>(B)</th>
<th>(S.E.)</th>
<th>(P.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM (mod by secure) → CART-Q meta</td>
<td>-.120</td>
<td>-.112</td>
<td>.044</td>
<td>.037*</td>
</tr>
<tr>
<td>CM (mod by avo) → CART-Q meta</td>
<td>.049</td>
<td>.052</td>
<td>.040</td>
<td>.186</td>
</tr>
<tr>
<td>CM (mod by anx) → CART-Q meta</td>
<td>-.056</td>
<td>-.056</td>
<td>.035</td>
<td>.117</td>
</tr>
<tr>
<td>O (mod by secure) → CART-Q meta</td>
<td>.091</td>
<td>.094</td>
<td>.049</td>
<td>.053</td>
</tr>
<tr>
<td>O (mod by avo) → CART-Q meta</td>
<td>.090</td>
<td>.092</td>
<td>.044</td>
<td>.037*</td>
</tr>
<tr>
<td>O (mod by anx) → CART-Q meta</td>
<td>.069</td>
<td>.070</td>
<td>.042</td>
<td>.097</td>
</tr>
<tr>
<td>S (mod by secure) → CART-Q meta</td>
<td>-.057</td>
<td>-.059</td>
<td>.047</td>
<td>.206</td>
</tr>
<tr>
<td>S (mod by avo) → CART-Q meta</td>
<td>-.058</td>
<td>-.059</td>
<td>.044</td>
<td>.178</td>
</tr>
<tr>
<td>S (mod by anx) → CART-Q meta</td>
<td>-.001</td>
<td>-.001</td>
<td>.045</td>
<td>.975</td>
</tr>
</tbody>
</table>

\*p < .01, **p < .05, ***p < .001, sec = secure attachment style, avo = avoidant attachment style, anx = anxious-ambivalent attachment style, CM = conflict management, O = openness, S = support

Figure 1.3

Secure attachment as a moderator for the relationship between conflict management and direct relationship quality.
Figure 1.4

*Anxious-ambivalent attachment as a moderator for the relationship between conflict management and direct relationship quality.*

![Graph showing the relationship between conflict management and relationship quality for low and high anxious attachment styles.](image)

Figure 1.5

*Secure attachment as a moderator for the relationship between conflict management and meta relationship quality.*

![Graph showing the relationship between conflict management and relationship quality for low and high secure attachment styles.](image)

**Discussion**

This study aimed to take a closer look at the interaction between athletes’ use of communication and their perception of relationship quality, and to what degree athletes’ individual attachment styles moderated this interaction. Previous research has been
conducted on relationship quality and attachment, and relationship quality and communication. However, the two roles have not yet been examined together, which was a motive for this study to be carried out.

**Direct effects (direct relationship quality)**

The first purpose of the study was to examine whether communication strategies such as conflict management, openness and support had an impact upon athletes’ perceptions of coach-athlete relationship quality. Hypothesis 1, assuming that athletes who engaged in these communication strategies would perceive high relationship quality, was to a large extent supported. The SEM analysis demonstrated that athletes’ perceptions of relationship quality from a direct perspective was significantly predicted by their use of the communication strategies conflict management and support. In other words, athletes who engaged in conflict management (which included discussing and resolving potential areas of disagreement) and support strategies (which included helping each other through difficult times) reported to like, trust and respect (closeness) their coach. In addition, they reported intent to remain in their relationship with their coach (commitment) and to have experienced friendly and responsive behaviours from their coach (complementarity), to a higher degree than athletes who did not engage in these strategies.

Athletes’ use of the communication strategy openness (which included efforts to engage in open lines of communication) was not a significant predictor of how they perceived the quality of their coach-athlete from a direct perspective. In other words, athletes’ use of openness strategies had no significant impact on how they liked, trusted and respected their coach; nor on their intents to remain in the relationship or their perceptions of complementarity.

**Direct effects (meta relationship quality)**

In contrary to athletes’ perceptions of direct relationship quality, openness was found a significant predictor for meta relationship quality. This difference between athletes’ direct and meta perception of relationship quality suggests that athletes’ use of openness strategies had little effect upon their own perceptions of closeness, commitment and complementarity in the coach-athlete relationship, but did affect their perceptions of how they thought their coaches experienced their relationship. For the latter case, athletes who engaged in openness strategies believed that their coaches perceived higher relationship quality than athletes who did not engage in openness strategies. This confirms previous studies that found significant associations between athletes’ perceptions of closeness and their use of openness strategies (Rhind & Jowett, 2011). Further, our findings for openness strategies indicate that athletes who were able to have open channels of communication with their coaches (e.g., stating their opinion when setting goals or showing their emotions), did not significantly perceive their coach-athlete relationship as better.
Athletes’ perceptions of relationship quality from a meta perspective was also significantly predicted by their use of conflict management strategies. As for direct relationship quality, athletes who engaged in conflict management perceived a higher meta relationship quality. Both these findings differ from previous research (e.g., Rhind & Jowett, 2011), which showed that athletes’ use of conflict management did not predict their perceptions of relationship quality, neither from a direct nor a meta perspective. The discrepancy between previous research and these findings might be a result of the small number of studies that has been published to date.

In contrast to the direct relationship quality perspective, athletes’ use of support strategies was not a significant predictor of how they perceived relationship quality from a meta perspective. In other words, athletes’ use of support strategies had impact upon how they perceived the relationship direct quality, but not on how they imagined that their coaches perceived the relationship quality (meta). This could be due to the different roles, where it is more expected of the coach to give the athlete support than the other way around (Côté & Fraser-Thomas, 2007; Davis & Jowett, 2010). In the light of this, a possible interpretation is that athletes were aware of their own use of support strategies towards the coach, and associated these with self-perceived relationship quality. However, they might not have believed that their use of support strategies would have impact on how the coaches perceived the relationship quality, due to the notion that the coach is the “wise leader” who provides support, and not the other way around (Côté & Fraser-Thomas, 2007; Davis & Jowett, 2010). This association has not been found in previous research. On the contrary, studies have shown that athletes tend to give more support when they perceive their coach to feel close to them (Rhind & Jowett, 2011). As previously mentioned, the limited amount of studies might be a reason behind the variation from earlier research.

**Moderating effects**

The second purpose of this study was to examine whether coach-athlete attachment style had a moderating effect on the association between conflict management strategies, openness and support, and the quality of the coach-athlete relationship. Hypothesis 2, assuming that secure attachment style would positively moderate the association between the use of communication strategies and relationship quality, was supported. When athletes’ attachment style was secure, their use of conflict management was associated with improvement of perceived relationship quality, both from a direct and a meta perspective. This means that the athletes with secure attachment associated their conflict management with perceptions of closeness, commitment and complementarity towards their coach, and from their coach. The findings are in line with previous attachment research, which has found that individuals with secure attachment have a more open and constructive approach to conflicts. Earlier research has also found a strong association between secure attachment and the ability to affect regulation, which makes it more likely for individuals with secure attachment to express themselves in a constructive and non
threatening way when having a conflict. (Mikulincer & Shaver, 2007). Secure attachment style was also a significant moderator for the association between support strategies and direct relationship quality, and for the association between openness strategies and meta relationship quality. Previous studies showed that athletes who experienced less insecurity were more likely to experience a greater level of relationship quality (Davis & Jowett, 2014; Davis, Jowett & Lafrenière, 2013).

Hypothesis 3, assuming that avoidant and anxious-ambivalent attachment styles would negatively moderate the association between the use of the communication strategies conflict management, openness and support and relationship quality, was partly supported. For athletes whose attachment style was anxious-ambivalent, their use of conflict management strategies was associated with a lower level of perceived direct relationship quality. The anxious-ambivalent attachment style was also a significant negative moderator of the association between support strategies and direct relationship quality. This means that the athletes’ with anxious-ambivalent attachment style associated their use of conflict management and support strategies with less closeness, commitment and complementarity in their coach-athlete relationship. These findings are supported by previous research, showing that for individuals with anxious-ambivalent attachment, conflict often is viewed as a threat to their wish to gain approval, support and security. Thus, they are more likely react to conflicts with fear, and solve conflicts by domination or submission (Mikulincer & Shaver, 2007). However, this moderating effect was not seen in the association between conflict management and meta relationship quality. In other words, the anxious-ambivalent athletes associated their use of conflict management with a lower relationship quality from their own point of view; but with higher relationship quality from their coaches’ perspective. This difference implicates that, even though anxious-ambivalent athletes themselves do not think of conflict management as something that improves their coach-athlete relationship, they still might think of it as something that improves the relationship from the coaches’ perspective. It is possible that this notion reflects coaches’ and clubs’ expressed encouragements for the athletes to state their opinion. This might also be a reason for why the anxious-ambivalent style did not moderate the association between athletes’ use or openness strategies and meta relationship quality.

For athletes with avoidant attachment style, their use of conflict management was associated with lower level of perceived meta relationship quality. This means that the avoidant attached athletes, unlike the athletes with secure or anxious-ambivalent attachment, to a lower degree associated their use of conflict management with improved relationship quality from the coaches’ point of view. This finding might be a reflection of avoidant attached individuals who wish to minimize the importance of the other person’s needs (Mikulincer & Shaver, 2007). This might also be a reason for why the avoidant attachment style also was a significant negative moderator of the association between athletes’ use of openness and meta relationship quality. Here, the avoidant athletes differed from the secured and the anxious-ambivalent, where the avoidant athletes did not
associate their use of openness strategies with improved relationship quality from the coaches’ point of view.

Avoidant attachment had no moderating effect on the association between conflict management and direct relationship quality. This differs from the secure attachment style, for which conflict management was associated with improved direct relationship quality, and from the anxious-ambivalent attachment style, for which conflict management was associated with a lower level of relationship quality. This finding appears to suggest that avoidant athletes who have a discomfort with closeness, distrust their coach, and remain both behaviourally and emotionally disconnected with their coach, may be less likely to experience satisfaction with aspects of sport and aspects of the coach-athlete relationship. This is in line with previous research which has shown that individuals with avoidant attachment style tend to see conflict as a threat to their autonomy, and therefore experience negative emotions when conflict management is inevitable (Mikulincer & Shaver, 2007). In light of this, one would have expected the avoidant attachment to be associated with a lower level of direct relationship quality. A possible reason for why this was not the case, might be that avoidant attached individuals to a higher degree feel dissatisfied in their relationship to the coach (Davis & Jowett, 2014). In other words, the association between use of conflict management and direct relationship quality is still there, but it might be misleading, due to that both the level of use and quality might be low. This might also be a reason for why avoidant attachment had no moderation effect on the association between support strategies and direct relationship quality.

Future directions

Due to the limited research on the COMPASS model, it is motivated to further examine the model in cultural settings other than the United Kingdom or Sweden, and for other populations (e.g., athletes younger than 15). Future research would also benefit from examining both the coach’s and the athlete’s perspective together, since the relationship is dyadic and the perceptions of closeness, commitment and complementarity might differ between them (Jowett & Lavallee, 2007). For instance, this research could be carried out by looking closer to the construct of co-orientation, in order to examine whether coaches and athletes share perceptions of the relationship. Since the study design was cross-sectional, future research should consider experimental and longitudinal designs to examine the directionality and bidirectionality of such effects. Also, longitudinal research may be useful in helping to better understand the impact of attachment style on athletes’ use of communications strategies and their perception of relationship, over time and through transitional periods (e.g., injury burnout, and competition versus preparation).

In the present situation, the understanding of the communication strategies still is elementary. In order to deepen the understanding of their particularity (e.g., in which situations they are used and in what way) future research would benefit from qualitative follow-up studies. In line with this, interventional research could be a way of examining
the strategies “in real life”, and also improving them. This would help with the causality perspective, too.

In accordance with the integrated research model, it would also be of practical use to investigate how the communication strategies are associated with other relevant sporting outcomes, such as performance, satisfaction or well-being.

**Strengths and Limitations**

The current study has a number of strengths. First of all, it broadens the knowledge for a novel research area, since the COMPASS strategies have never been examined in Sweden before. The validation of the COMPASS model in a Swedish sample opens up for further practical applications in a Swedish sport context. Furthermore, the sample of this study was representative (athletes were recruited from across a variety sports, from different levels and were different in age) and consisted a good sample size according to EFPA criterions (2013).

While this research supplies knowledge and understanding, several limitations are worthy our attentions. Firstly, as stated before, the number of published studies on the COMPASS model are few. Likewise, this research has only been conducted in a limited cultural setting, which motivates further research. Secondly, this study only examined relationship quality from an athlete’s perspective. Thirdly, only three of seven maintenance strategies were examined in relation to relationship quality and athlete attachment style. For instance, research has found support for further strategies as preventative and motivational, which was significant for both coach and the athlete (Rhind & Jowett, 2011). Including more strategies could have broaden the understanding of athletes’ use of communication. Fourthly, the study used self-reporting questionnaires to collect the data, which might have influenced the data. For instance, there is a risk that the answers are exaggerated or adapted due to athletes’ social desirability bias (Wright, 2005). Lastly, the current study is based on a cross-sectional design, which limits inferences related to the directionality and causality of the effects between athletes’ use of communication strategies and relationship quality.

**Conclusions**

The presented findings provide empirical support for the central notion of Rhind’s and Jowett’s (2010) COMPASS model, through demonstrating that athletes’ use of communication strategies is associated with their perceptions of relationship quality. Findings also stress that quantity matters, where the greater use of communication strategies, the greater perceived relationship quality.

Further, the results highlight that the association between athletes’ use of communication strategies and relationship quality is affected by athletes’ attachment style. Thus, the notion that “one size does not fit all”, is to a high degree true when it comes to developing and strengthening coach-athlete relationships. Due to the study’s findings, a
coach who adapts his or her interaction style to match the athlete’s attachment style, will be more likely to develop a strong coach-athlete bond. The coach has the capacity to influence an insecurely attached athlete in a positive direction, by transmitting a positive perception of the athlete and developing athletes’ self-worth and self-confidence (Ainsworth, 1979; Côté & Fraser-Thomas, 2007; Davis & Jowett, 2010).

This tells us the importance of coaches being responsive, accepting and supportive towards athletes’ signals and needs. In turn, this might help facilitate athletes’ perception of being understood, appreciated, cared for, and respected (Mikulincer & Shaver, 2007; Côté & Fraser-Thomas, 2007; Davis & Jowett, 2010).

A mission for sports psychologists would be to promote the use of communication strategies and make coaches and sports clubs aware of the dyadic and interdependent impact that coaches and athletes have on each other. As stated previously, athletes’ dissatisfaction with the coach-athlete relationship has been shown to negatively affect coaches’ perception of the relationship. Since coaches’ perception of relationship dissatisfaction might hinder their ability to develop and support the athlete, and negatively affected the development of closeness in the coach-athlete relationship (Davis & Jowett, 2010; Davis et al., 2013), it is of great importance that coaches receive more knowledge about how to communicate with “harder” athletes, in order to build and maintain effective relationships.

Finally, the present study shows that communication and attachment are key factors to take in consideration, when developing and maintain successful and satisfactory relationships in sport contexts.


