The Role of Personality, Empathy, and Satisfaction with Instruction within the Context of the Coach-Athlete Relationship

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Abstract

The present study, guided by Integrated Research Model of coach-athlete relationships, investigated the linear associations between personality, relationship quality, perceptions of coach empathy, and satisfaction with training. A total of 178 athletes completed a self-report instrument that assessed the main variables of the study. Structural equation modelling supported that (a) athletes’ perceptions of relationship quality was affected by their personality and affected their views about how empathic their coach was relative to them, and (b) athletes’ perceptions of coach empathy was affected by their perceptions of the quality of the relationship with the coach and affected their levels of satisfaction with training. In conclusion, this demonstrates an integrated approach to investigating the associations between antecedent, quality, and consequent variables of the coach-athlete relationship.

Keywords: personality, empathy, relationship, athlete, coach, satisfaction

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Introduction

It is widely acknowledged that coaches play a principal role in developing the talent of their athletes through guidance, instruction, and careful management of resources (Cushion, 2007). This highly complex and interdependent process between coaches and athletes primarily unfolds during periods of practice and competition. The manner in which coaches and athletes interact, relate, and communicate with one another can have a profound impact upon the success of the athlete (e.g., Jowett & Cockerill, 2003). The interpersonal dynamics between coaches and athletes have been conceptualised in a number of ways, ranging from concepts drawn from business and leadership theory and research (e.g., Smoll & Smith, 1989), developmental and pedagogical approaches (e.g., Côté, Salmela, Trudel, Baria, & Russell, 1995; Jones, Armour, & Potrac, 2004), and relationship perspectives (e.g., Jowett, 2007; Mageau & Vallerand, 2003; Poczwardowski, Barott, & Henschen, 2002). Collectively, these conceptual frameworks underline the centrality of the coach-athlete dyad for performance accomplishments and personal satisfaction. Jowett and Poczwardowski (2007) have proposed an integrated research model that draws upon previous theories in order to provide an impetus for research that will help researchers and practitioners to more fully understand the interpersonal dynamics by exploring the predictive and explanatory processes of the dyadic relationship developed between coaches and athletes.

Integrated Research Model

Jowett and Poczwardowski’s (2007) integrated research model consists of three main layers. At the top of the model, the first layer contains antecedents of the quality of the coach-athlete relationship. Such variables include, individual differences (e.g., personality and personal experience), the social-cultural context (e.g., social roles and cultural values), and characteristics specific to that relationship (e.g., relationship duration, type of relationship). The second layer contains factors that describe the quality of the coach-athlete relationship itself including members’ interpersonal thoughts, feelings and behaviours. Finally, the third layer contains the outcomes or consequences of the quality of the relationship. These include intrapersonal (e.g., personal satisfaction and performance), interpersonal (e.g., relationship satisfaction, interpersonal conflict), and group (e.g., team cohesion, collective efficacy, and popularity) factors. The second layer of the relationship quality is sandwiched between two layers of interpersonal communication. Communication, be it verbal or nonverbal, intended or unintended, and how the coach and athlete perceive it as effective or ineffective, is the process by which the relationship is formed and maintained (Jowett & Poczwardowski, 2007; Rhind & Jowett, 2010).

Jowett and Poczwardowski’s (2007) model favours an approach that concurrently considers the antecedents and outcomes of this central relationship in sports coaching, while considering the potential role
of communication. However, to the authors’ knowledge, no single study has attempted to empirically examine the postulated links. Thus, this study aims to fill this gap by examining the hypothesised linear associations between personality (layer 1), relationship quality (layer 2), and personal satisfaction (layer 3), as well as the role of interpersonal communication.

**The Coach-Athlete Relationship Quality**

According to Jowett and colleagues (e.g., Jowett & Poczwardowski, 2007), the coach-athlete relationship is defined as a situation in which coaches’ and athletes’ interpersonal feelings, thoughts, and behaviors are interdependent. Subsequently, the quality of that relationship is viewed as a dynamic state that is made up by the combined interrelating of coaches and athletes’ interpersonal feelings of Closeness, thoughts of Commitment, and behaviours of Complementarity (known as the 3Cs; see e.g., Jowett, 2007). Closeness refers to coaches’ and athletes’ affective bonds presented in such interpersonal feelings as trust, respect, and appreciation. Commitment refers to coaches’ and athletes’ intention or motivation to maintain a close relationship that is long-term. Complementarity refers to coaches’ and athletes’ corresponding and co-operative behaviours reflected in members’ actions of readiness, easiness, and responsiveness among others.

Jowett and colleagues have developed and validated a self-report instrument, known as the Coach-Athlete Relationship Questionnaire (CART-Q), to assess the quality and nature of the coach-athlete relationship as this is defined via the 3Cs (e.g., Jowett, 2009; Jowett & Ntoumanis, 2004). The advent of the CART-Q has accelerated research in this area focusing on examining the correlates of the quality of the coach-athlete relationship including satisfaction (Lorimer & Jowett, 2009; Jowett & Nezlek, in press; Jowett & Ntoumanis, 2004), team cohesion (Jowett & Chaundy, 2004), collective efficacy (Jowett, Shanmugam, & Caccoulis, in press), passion (Lafraniere, Jowett, Vallerand, Donahue, & Lorimer, 2008), motivation (Adie & Jowett, 2010), coach-created motivational climate (Olympiou, Jowett, & Duda, 2008), social support and interpersonal conflict (Jowett, 2009).

**Personality as an Antecedent and Satisfaction as an Outcome of the Relationship**

Personality is viewed as a potential antecedent of the coach-athlete relationship quality (Jowett & Poczwardowski, 2007). Personality describes intrinsic differences in individuals that are thought to be capable of influencing their actions and reactions to the environment (McCrae & Costa, 1987). The most prevalent theory in personality research is the Big Five Factor model that describes personality in terms of five basic traits: extraversion, agreeableness, conscientiousness, emotional stability, and intellect (Goldberg, 1992; see also, McCrae & Costa, 1987). These personality factors have been found to associate closely with individuals’ capacity to develop and maintain good quality interpersonal relationships. For example,
positive personality factors, such as agreeableness that characterises individuals’ tendency to co-operate, trust and understand have been associated with relationships that are characterised by support and commitment (e.g., Cuperman & Ickes, 2009). In a longitudinal study, Asendorpf and Wilpers (1998) found that agreeableness had the capacity to prevent or reduce relationship conflict. Similarly, extroversion is a personality type characterised by sociability and gregariousness, has been found with relationships that are positive, responsive, and close (e.g., Berry & Hansen, 2000; Yang & Jowett, 2010). Specifically, Yang and Jowett (2010) investigating the effects of Big Five personality factors on the quality of the coach-athlete relationship showed that neuroticism (emotional stability), conscientiousness and extroversion were significant determinants of athletes’ (and coaches’) perceptions of relationship quality. In contrast, negative personality factors such as lack of emotional stability (i.e., neuroticism, anxiousness) have been associated with stressing, conflicting, dissatisfying, and non-committed relationships (e.g., Karney & Bradbury, 1995; White, Hendrick, & Hendrick, 2004).

Understanding the outcomes of the coach-athlete relationship quality is as important as understanding its antecedents. The outcomes of the coach-athlete relationship can be positive (e.g., success, satisfaction, enjoyment, fulfilment) and negative (e.g., failure, dissatisfaction, conflict, negative affect). While there are many potential outcomes, satisfaction with sport is often seen as being one preeminent indicator or close correlate of one’s success within the context of sport (e.g., Riemer, 2007). Riemer and Chelladurai (1998) defined athletes’ satisfaction as a positive affective state based upon their own evaluation, conscious or unconscious, of their experiences in sport. Satisfaction has been linked with many important theoretical concepts including coaching leadership behaviours (Riemer, 2007), coaches’ perceived relationship quality (Lorimer, 2010) and perceived motivation (Jowett, 2008), as well as athletes’ perceptions of interdependence with coach (Jowett & Nezlek, in press), and attachment with coach (Davis & Jowett, 2010). It would thus appear that satisfaction is a sound indicator of one’s perceived success and experience of sport more generally.

**Empathy as a Dimension of Communication**

Jowett and Poczwardowski (2007) proposed that the association between relationship quality and its outcomes is mediated by communication. Communication is a vital factor in effective and successful coaching. For example, LaVoı (2007) has argued that communication contributes to positive relationship outcomes by enabling coaches and athletes to work more effectively together. It is the process of communication that allows coaches to impart knowledge, provide feedback, and communicate expectations and goals, whilst allowing athletes to provide feedback about their efforts, thoughts, feelings, and needs. Moreover, the development of a strong-rooted coaching partnership has been shown to reside in the type (e.g., dialogue, goal setting, openness), volume (e.g., how much), and frequency (e.g., how often) of communication (Rhind & Jowett, 2010).
Within the coach-athlete relationship literature, a series of qualitative studies conducted by Jowett and colleagues (e.g., Jowett, 2003; Jowett & Cockerill, 2003) have highlighted the importance of communication. For example, it has been found that coaches and athletes were more satisfied when they believed they were understood by their partner (e.g., “One of her qualities was that she made us feel she understood us” extract from Jowett & Cockerill, 2003) and believed that not being understood by their partner led to conflict and distress (e.g., [coach] did not understand how I felt and he pushed me, something I could not tolerate at the time” extract from Jowett, 2003). Hence it can be argued that while successful communication affects the ability of coaches and athletes to work together, it is their perception of the effectiveness of their communication that influences their satisfaction. For example, an athlete who has placed a lot of effort into their relationship (reflected in his/her commitment) and into working effectively with their coach (reflected in his/her complementarity) is more likely to be satisfied with that relationship if they believe that their coach understands them.

Empathy is viewed as a dimension of communication and a powerful communication skill (Redmond, 1985). There is a proliferation of definitions of empathy; in this study, empathy is defined as athletes’ capacity to understand their respective coach’s feelings and thoughts (cf. Rogers, 1959; Ickes, 1993). Research on empathy within sport psychology and sport coaching more generally is limited. At the time of writing, only one study within sport psychology literature has examined the links between empathy and satisfaction. Lorimer and Jowett (2009) examined the degree of accuracy of one’s inferences of the other’s thoughts and feelings in on-going coach-athlete dyadic interactions. They found a positive association between empathy and athletes’ satisfaction with the training that they received from their coaches.

**Hypotheses of the Present Study**

Based on the integrated research model and empirical research evidence, the present study aimed to explore the linear associations between personality, relationship quality, empathy, and satisfaction with instruction (see Figure 1). In order to examine the linear associations among the aforementioned variables the following hypotheses were initially examined. First, as stated by the integrated research model, the personality trait would be directly associated with athletes’ perceptions of their coach-athlete relationships, and in turn, such perceptions of relationship quality would be associated with the effectiveness of interpersonal communication among the coach and the athlete as conceptualised by perceived empathic understanding. Consequently, it was hypothesised that athletes’ perceptions of their coach-athlete relationships would be the mediator between the personality and perceived empathy understanding of the athletes’ coaches. Second, it was proposed that athletes’ perceptions of the coach-athlete relationship quality would be associated with satisfaction with sport. More specifically, it was hypothesised that the mechanism by which athletes’ relationship quality would be associated with satisfaction with sport (training and instruction) was via their perceptions of coaches’ level of empathy.
Method

Participants

One hundred and seventy eight athletes, aged 18 to 38 years (Mage = 20.40, SD = 2.79) performing in such sports as rugby, golf, gymnastics, football, cricket, martial arts, cycling, athletics, and field hockey, participated in this study. Ninety (51%) were males and eighty-eight (49%) were females. Sixty (34 %) competed at international level, seventy four (42%) at national level, nineteen (10%) at regional level, and twenty five (14%) at club level. The average duration of the coach-athlete relationship was 37.49 months.

Instruments

The International Personality Item Pool – 50 (Goldberg et al., 2006) was used to assess athletes’ personality. The IPIP is an inventory of 50 items that measures five personality factors: Extroversion, Agreeableness, Conscientiousness, Emotional Stability and Intellect. Each dimension comprised 10 items. For each of the items, there was a statement in a fragmented form, for example: “I am the life of the party” for Extraversion, “I am interested in people” for Agreeableness, “I am always prepared” for Conscientiousness, “I am relaxed most of the time” for Emotional Stability (opposite of neuroticism), and “I have a rich vocabulary” for Intellect (also known as openness to experience). Athletes were asked to describe themselves the way they usually are on a 5-point scale ranging from 1 (“very inaccurate”) to 5.

Figure 1. A simplified version of the integrated research model of coach-athlete relationships (see Jowett & Poczwardowski, 2007).
The Coach-Athlete Relationship Questionnaire (CART-Qs) was employed to assess athletes’ perceptions of the quality of the relationship with their coach. The 11-item direct perspective of the CART-Q (Jowett & Ntoumanis, 2004) was used to measure how athletes perceived the relationship with their coach in terms of closeness (4 items; e.g., “I like my coach”), commitment (3 items; e.g., “I am committed to my coach”), and complementarity (4 items; e.g., “When I am coached by my coach, I am responsive to his/her efforts”). The response scale for this measure ranged from 1 (“strongly disagree”) to 7 (“strongly agree”). For the purpose of this study, the 3Cs were combined to provide an index of relationship quality (see e.g., Adie & Jowett, 2010).

The Barrett – Lennard Empathy Scale (Barrett-Lennard, 1962) is a multidimensional scale that assesses the level of respect, empathy, and the unconditionality in a partnership. For the purpose of this study, the 8 positive worded items from the subscale of empathy were utilized to assess athletes’ perceptions of their coaches’ understanding (e.g., “My coach nearly always knows exactly what I mean”). The response ranged from 1 (“strongly disagree”) to 7 (“strongly agree”).

The Athlete Satisfaction Questionnaire (Riemer & Chelladurai, 1998) measures 15 subscales of athlete satisfaction (e.g., personal dedication, team integration, ability utilisation, personal treatment). For the purpose of this study, only one subscale was measured, namely, athlete satisfaction with training and instruction. This subscale comprises 3 items (e.g., “I am satisfied with the training I have received from the coach during the season”). The response ranged from 1 (“strongly disagree”) to 7 (“strongly agree”).

Procedures

Loughborough University’s Ethical Advisory Committee granted ethical approval before data collection was undertaken. Prospective participants were contacted either directly or indirectly via their coaches or club organisers and invited to participate in the study. Athletes were informed about the overall aims of the study and the requirements of participation. Participants who agreed to take part were supplied with a questionnaire pack that included an invitation participation letter, consent form, and the questionnaires. The questionnaire was either completed in the presence of the test administrator or in the athletes’ own time.

Data Analysis

Descriptive statistics, including means, standard deviations, skewness, kurtosis, and a correlation matrix, as well as alpha coefficients, were computed using SPSS 16.0. Evidence for the factorial validity of the measures was examined using confirmatory factor analysis. Mediation effects and the structural model were analyzed using a robust maximum likelihood method with EQS 6.1 (Bentler, 1995). Each measurement model (all latent variables within the structural model were allowed to freely correlate) was tested before
examining the structural model. Item parceling technique (Hau & Marsh, 2004) was used to reduce the dimensionality and number of parameters estimated due to the complexity of the hypothesized models as well as the limited sample size. For example, the latent variable agreeableness had ten indicators originally which were parcelled into five indicators, and the indicators of perceived empathy were parcelled into four indicators from eight original indicators. Item parceling was not used in the case of other latent variables whose number of indicators did not meet the criteria of using this technique (Little, Cunningham, & Shara, 2002).

**Mediation analysis.** Three structural models were tested in accordance with the guidelines of Baron and Kenny (1986). First, a direct effects model (ID1 → DV1) was tested where the independent variable (ID) predicted the dependent variable (DV) directly without involving the mediator variable (MV). Second, the mediator model (ID1 → MV1 → DV1) was tested. The fit indices associated with both models have to be acceptable with significant path coefficients to support potential mediation. Finally, a combined effects model with both direct effects and mediation effects (ID2 → DV2 and ID2 → MV2 → DV2) was tested. In the case of full mediation, the magnitude of direct path (ID2 → DV2) coefficient in the combined effects model should be reduced to non-significance in comparison with the path (ID1 → DV1) in the direct effects model, or reduced in magnitude but remain significant in the case of partial mediation. An additional criteria in examining the mediation effects was a chi-square difference test (Holmbeck, 1997) between combined and mediator models. If the mediation model fits best, then complete mediation effects is upheld. Otherwise, only a partial mediation effect is supported.

Overall goodness of fit of the proposed models with the data was evaluated by multiple indices of good fit as well as the goodness-of-fit chi-square. The model is considered to be acceptable when the value of chi-square divided by its degrees of freedom (χ²/df) is lower than 2.0 (Bollen, 1989). The comparative fit index (CFI), non-normed fit index (NNFI) as well as root-mean-square error of approximation (RMSEA) were used to evaluate the adequacy of models. Fan, Thompson, and Wang (1999) have shown that these fit indexes are the least affected by sample size. Traditionally CFI and NNFI values > .90, and RMSEA value < .08 indicates acceptable model fit (Bentler & Bonett, 1980). Although, Hu and Bentler (1999) have proposed alternative cutoff criteria of CFI and NNFI values > .95 and RMSEA value < .06, the practical applications of these new criteria seem to be controversial (Marsh, 2004). The present study adopted the traditional goodness-of-fit guidelines.

**Results**

There was one case with missing data – this case was deleted from further analysis. Table 1 presents means (Ms), standard deviations (SDs), intercorrelations (rs), skewness and kurtosis values, as well
as alpha coefficients (α) for all of the main variables of this study. Agreeableness was the only personality variable that was significantly correlated with the variables of the coach-athlete relationship quality, perceived empathy of the coach, and satisfaction with instruction. Based on this finding, all subsequent analyses were conducted with agreeableness. All of the skewness and kurtosis values were (see Table 1); these were considered to be acceptable (Miles & Shevlin, 2001). Moreover, no extreme outliers were identified through visual examination of the box plots. However, there was evidence of multivariate non-normality in the data (further information is available from the first author). Therefore, maximum likelihood (ML) estimation was used with Satorra-Bentler correction to the $\chi^2$ statistic and standard errors for all CFAs and SEMs (Satorra & Bentler, 1994). All main variables demonstrated good internal consistency with α values above the acceptable cutoff point of .70 (Nunnally, 1978).

Table 1. Correlations, descriptive statistics skew, kurtosis, scale reliabilities, and scale ranges

<table>
<thead>
<tr>
<th>Subscale</th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Extroversion</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2 Agreeableness</td>
<td>0.26**</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3 Conscientiousness</td>
<td>-0.02</td>
<td>0.15*</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Emotional Stability</td>
<td>0.26**</td>
<td>0.04</td>
<td>-0.06</td>
<td>1.0</td>
<td></td>
<td></td>
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<tr>
<td>5 Intellect</td>
<td>0.20**</td>
<td>0.18*</td>
<td>0.32**</td>
<td>0.12</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of coach-athlete relationships</td>
<td>0.07</td>
<td>0.34**</td>
<td>0.05</td>
<td>0.10</td>
<td>-0.08</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction with training and instruction</td>
<td>0.18*</td>
<td>0.15*</td>
<td>-0.02</td>
<td>0.15*</td>
<td>-0.05</td>
<td>0.63**</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>8 Perceived empathy</td>
<td>0.06</td>
<td>0.24**</td>
<td>0.10</td>
<td>-0.01</td>
<td>-0.21**</td>
<td>0.78**</td>
<td>0.62**</td>
<td>1.0</td>
</tr>
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</table>

Means (Ms)                                    | 3.47  | 3.77  | 3.44  | 3.27  | 3.15  | 5.61  | 5.24  | 4.85  |
SD (SDs)                                       | 0.63  | 0.57  | 0.54  | 0.72  | 0.45  | 1.14  | 1.27  | 1.30  |
Skewness                                       | 0.09  | -0.48 | -0.13 | -0.13 | 0.24  | -1.44 | -0.89 | -0.56 |
Kurtosis                                       | -0.41 | 0.10  | -0.02 | -0.83 | -0.85 | 2.00  | 0.54  | -0.54 |
α                                              | 0.85  | 0.81  | 0.75  | 0.84  | 0.76  | 0.95  | 0.90  | 0.95  |

* $p < .05$ (2-tailed), **$p < .01$ (2-tailed).
Testing Mediation

Structural equation modeling with the robust maximum likelihood method of analysis was used to test two mediation hypotheses (H1 & H2). Mediation effects were assessed through a three-step process that aimed to test (1) a direct effects model; (2) a mediator effects model; and (3) a combined effects model that involves both direct effects and mediator effects.

Hypothesis 1. The first hypothesis (H1) aimed to explore the mediation effects of the coach-athlete relationship quality in the association between agreeableness and perceived empathy. The measurement model, whereby athlete personality defined by agreeableness, coach-athlete relationship quality, and perceived empathy were allowed to freely correlate, was evaluated first. Results indicated a close fit to the data, CFI = .98, NNFI = .97, RMSEA = .06, $\chi^2$/df = 1.65. Subsequently, structural models were tested without any modifications. The results of the direct effects (agreeableness $\rightarrow$ perceived empathy) model indicated a good fit; CFI = .98, NNFI = .97, RMSEA = .05, $\chi^2$/df = 1.75. Agreeableness predicted 7% of the variance in Perceived Empathy with a significant path coefficient of .27. In the mediator model (agreeableness $\rightarrow$ coach-athlete relationship quality $\rightarrow$ perceived empathy), results suggested a slight loss of fit than the direct effects model, but still fitted well: CFI = .97, NNFI = .96, RMSEA = .06, $\chi^2$/df = 1.83. All the paths of this model were significant (see Figure 3). This model predicted 23% of variance ($\beta = .48$) in coach-athlete relationship quality, and 67% ($\beta = .82$) of perceived empathy. Therefore, taking into account the direct relationship found in the direct effects model, it implied possible mediation effects of the coach-athlete relationship quality. The final combined effects model provided a satisfactory fit, CFI = .96, NNFI = .95, RMSEA = .07, $\chi^2$/df = 1.97 (see Figure 2).

![Figure 2. Combined effects model of mediation hypothesis 1. Solid lines indicate significant relationships ($p < .05$), and the dotted line the non-significant relationship. C-A relationship quality = coach-athlete relationship quality; AG = indicator of agreeableness; E = indicator of perceived empathy.](image-url)
Figure 3. Combined effects model of mediation hypothesis 2. Solid lines indicate significant relationships (p < .05). C-A relationship quality = coach-athlete relationship quality; E = indicator of perceived empathy; S = indicator of satisfaction with instruction and training.

A chi-square difference test was conducted between combined and mediator effects model, the result suggested that the mediator effects model fitted better than the combined effects model ($\chi^2$diff(3) = 27.8639; p > .05). Compared with the direct effects model, the direct path between agreeableness and empathy was reduced to non-significance in the combined effects model. The rest of the paths remained significant, the coach-athlete relationship quality ($R^2 = .18$) was predicted by agreeableness ($\beta = .43$), and 76% of variance in perceived empathy was predicted by quality of the coach-athlete relationship ($\beta = .90$). Thus, the overall analyses suggested a complete mediation of the association between agreeableness and perceived empathy by the coach-athlete relationship quality.

**Hypothesis 2.** The second hypothesis assumed that perceived empathy was a mediator between the coach-athlete relationship quality and satisfaction with training (H2). Given that the measurement model (coach-athlete relationship quality, perceived empathy, and athlete’s satisfaction with training were freely correlated) provided a reasonable fit to the data, CFI = .98, NNFI = .97, RMSEA = .06, $\chi^2$/df = 1.65, no further modification were made in testing the structural models. The direct effects model (the coach-athlete relationship quality $\rightarrow$ satisfaction with training) illustrated a good fit, CFI = .97, NNFI = .96, RMSEA = .06, $\chi^2$/df = 1.73. The path coefficient was significant with $\beta = .69$ and the model predicted 48% of variance in satisfaction with training. The mediator effects model (the coach-athlete relationship quality $\rightarrow$ perceived empathy $\rightarrow$ satisfaction with training) provided a good fit to the data, CFI = .96, NNFI = .95, RMSEA = .07, $\chi^2$/df = 1.85. All the paths were significant. The coach-athlete relationship quality predicted 70% of the variance in perceived empathy ($\beta = .84$), and 52% of the variance in satisfaction with training was predicted by perceived empathy ($\beta = .72$). In the final combined effects model (see Figure 2), fit
indices also suggested a close fit to the data, CFI = .97, NNFI = .96, RMSEA = .06, $\chi^2$/df = 1.78. All the paths were significant and the model predicted 69% ($\beta = .83$) of the variance in perceived empathy, and 49% ($\beta = .25$) of satisfaction with training. The magnitude of path coefficient between coach-athlete relationship quality and satisfaction with training was reduced from .69 in the direct effects model to .47 in the combined model. A chi-square difference test demonstrated that the combined effects model had a significant better fit than the mediator effects model ($\chi^2$diff(1) = 7.9391; $p < .01$). Thus, the results supported a partial mediation effect as a result of perceived empathy.

**Testing the Structural Model of the Hypothesized Linear Associations.** The evidence of both mediation hypotheses tested provided acceptable statistical support to assess the postulated structural model in which agreeableness was assumed to be a determinant of the coach-athlete relationship quality, and perceived empathy was a mediator between the coach-athlete relationship and athletes’ satisfaction with training (see Figure 4). The fit of the measurement model was tested first in which agreeableness, coach-athlete relationship quality, perceived empathy and athletes’ satisfaction with training were freely correlated, CFI = .98, NNFI = .96, RMSEA = .06, $\chi^2$/df = 1.62. Based on these findings a structural model was tested. The structural model revealed an excellent fit to the data, CFI = .98, NNFI = .97, RMSEA = .05, $\chi^2$/df = 1.48. All the paths were significant; agreeableness predicted 22% of the variance in the coach-athlete relationship quality, 86% of the variance in perceived empathy, and 60% of the variance in satisfaction with training.

![Figure 4](image.png)

Figure 4. The role of agreeableness and empathy in the link between athletes’ perceived coach-athlete relationship quality and satisfaction with their coach’s instruction. All parameters are standardized and significant ($p < .05$). C-A relationship quality = coach-athlete relationship quality. $S$ = indicator of satisfaction with instruction and training. $E$ = indicator of perceived empathy.
Discussion

Based on the integrated research model (Jowett & Poczwardowski, 2007) and empirical research evidence (e.g., Cuperman & Ickes, 2009; Lorimer & Jowett, 2009), the present study aimed to explore the linear associations between personality, relationship quality, empathy, and satisfaction with instruction. In order to examine the linear associations among the aforementioned variables two hypotheses were initially examined. The findings supported the first hypothesis (H1) and suggest that the process by which personality and empathy are related is through the quality of the coach-athlete relationship. It is plausible to argue that athletes whose personality is characterized by agreeableness are more likely to perceive their coach as empathic, understanding, and sensitive to the expressed needs and goals because the quality of the relationship they are capable developing, allows them to interact in an accommodating manner. Less agreeable athletes are likely to be more egocentric and skeptical of others’ intentions (cf. Costa & McCrae, 1992). Lack of agreeableness may be detrimental to the quality of the relationship because it prevents athletes to be giving, sharing, and fair. Such lack of reciprocity and interdependence is likely to affect empathy (e.g., mutual understanding). These findings are in line with research that has found links between personality factors, empathy, and relationship quality (e.g., Cuperman & Ickes, 2009; Yang & Jowett, 2010).

In this study, the only personality factor that was found to be associated with relationship quality was agreeableness. This is inconsistent with the findings of Yang and Jowett (2010). It is unclear why no more associations were reported. It may be that the relatively small sample size of this study may have introduced errors that reduced potential significant associations among the main variables of this study.

In the second hypothesis (H2), the mechanism by which athletes’ relationship quality link to satisfaction with sport (training and instruction) via their perceptions of coaches’ level of empathy (H2) was examined. The findings partially supported H2. It is plausible that athletes who feel that their relationships with the coach is underlined by trust, respect, longevity, and co-operation are more likely to be satisfied with their training because they feel that their coaches are attune with, sensitive and thus more knowledgeable of their needs. This finding is in line with previous studies that have focused on examining the association between relationship bonds and satisfaction with sport (e.g., Lorimer & Jowett, 2009). It has also generated new knowledge as this relates to the processes by which relationship bonds associate with satisfaction. Empathy appears to be an important mechanism of this association. However, perceived empathy as a dimension of communication can be viewed as an antecedent and outcome of relationship quality (Jowett & Poczwardowski, 2007). Therefore, research should explore the possibility of perceived empathy acting as a mediator between personality factors such as agreeableness and relationship quality. Employing longitudinal and experimental research designs the specific associations of communication as an
antecedent and/or consequent variable of the relationship quality could also be explored.

From a practical perspective, the findings of this study suggest that it would be appropriate and necessary to acknowledge the impact of one’s agreeableness on the quality of the relationship and its development and maintenance. Agreeableness is likely to impact on communication in terms of how athletes’ specifically perceive their coaches to be empathic, understanding, knowledgeable, and sensitive to their needs. The findings further point to the usefulness of the potential impact of the quality of the coach-athlete relationship can have on athletes’ levels of satisfaction with training. When coach-athlete relationships fail or are less harmonious, it is worthwhile paying attention on its members’ personality characteristics and dimensions of communication.

Although, the present study attempted to fill a gap in the literature, there are several limitations which warrant attention. The coach-athlete relationship was assessed solely via athletes’ perceptions. Given that the relationship can be viewed as a dyadic phenomenon, future studies could assess both members’ perceptions of relationship quality. Moreover, a dyadic research design may allow the concurrent examination of coaches and athletes’ personality traits on relationship quality, communication dimensions such as empathy, and satisfaction facet. Moreover, such a design would allow the assessment of whether the quality of the coach-athlete relationship could be determined by how well the personality traits of the coach and the athlete match or are compatible with another. This conjecture warrants investigation as it could evidently have far reaching practical implications within the context of coaching. However, based on the lack of association between the majority of the personality factors measured and relationship quality as well as perceived empathy, it is important to highlight that the use of the IPIP (Goldberg et al., 2006) in measuring the personality traits within the context of sport and specifically in the population of athletes remains uncertain. Thus, future research that aims to investigate its psychometric properties is warranted.

Overall, the present study is one of the first to empirically explore the proposed linear associations between athlete personality, relationship quality, perceived empathy, and satisfaction with training and instruction (see Jowett & Poczwardowski, 2007). The findings of this study help extend current knowledge in this area of research and offer an insight into the antecedents and outcome variables of the quality of the coach-athlete relationship. More importantly, these findings provide important empirical evidence and theoretical knowledge for practitioners including consultant psychologists, coaches and athletes. This study makes a small albeit noteworthy contribution and provides a solid basis for more and better research to be conducted in this field.

References


& D. Lavallee (Eds.), *Social psychology in sport*. (pp. 29-40). Champaign, IL: Human Kinetics.


