COACH'S EFFECTIVENESS MEDIATE LONGITUDINAL EFFECTS OF TRANSFORMATIONAL LEADERSHIP BEHAVIOUR ON ATHLETE OUTCOMES

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ABSTRACT

The present study aimed to investigate whether athlete perceptions of coaching effectiveness mediate the longitudinal relationships between perceptions of transformational leadership (TL) and athlete outcomes. 174 team-sport athletes (Rugby = 35, Basketball = 46, Football = 93) participated by completing psychometric measures of the study variables at two time points (retention rate = 93.5%). Data analyses revealed athletes' perceptions of their coach's character-building effectiveness at Time 1 did not mediate a negative predictive effect of perceptions of coach appropriate role model behaviour at Time 1 on athlete antisocial opponent behaviour at Time 2. However, such perceptions did mediate a negative effect of perceptions of coach appropriate role model behaviour at Time 1 on athlete antisocial teammate behaviour at Time 2. Further, athletes' perceptions of their coach's motivation effectiveness at Time 1 mediated a positive effect of coach individual consideration behaviour at Time 1 on trust at Time 2. The findings of this study suggest athletes' perceptions of their coach's transformational leadership behaviour may at times influence athlete outcomes through changes in athletes' perceptions of their coach's effectiveness.

INTRODUCTION

Athletes' view of their coach may have significant ramifications for competitors' game encounters in the team and individual sports (Mohd Kassim & Boardley, 2018). Coaches hold an important leadership role as they are responsible for guiding the development of knowledge, skills and psychological well-being of the athletes they coach (Callow, Smith, Hardy, Arthur, & Hardy, 2009). Further, transformational leadership is defined as a leader's ability to inspire, empower and cause others to achieve levels of performance above what they would normally expect to be possible (Avolio & Bass, 1995). A positive relationship and effective coaching lead the athletes and coaches to develop themselves feel encourage and trust each other (Mohd Kassim, Abdullah, Japilus, & Yusri 2019). Unsurprisingly, transformational leadership theory (Bass & Avolio, 1994) has been a prominent guiding theory in research seeking to understand leadership behaviour in sport (e.g., Beauchamp, Barling, & Morton, 2011; Callow et al., 2009). Such research has identified the positive effects of coaches' transformational leadership on athlete-level outcomes (e.g., Charbonneau, Barling, & Kelloway, 2001).

Another factor that has been linked with desirable athlete-level outcomes is coaching effectiveness (Côté & Gilbert, 2009; Horn, 2008). Moreover, models of coaching effectiveness suggest athletes' perceptions of their coach's effectiveness are based upon their perceptions of coach behaviour (Horn, 2002; Smoll & Smith, 1989). Therefore, the effects of athletes' perceptions of their coach's transformational leadership behaviour on athlete outcomes may be at least in part mediated through athletes' perceptions of their coach's effectiveness. Thus, the primary aim of the current study was to test this supposition by investigating the relations among transformational leadership behaviour, coaching effectiveness and relevant athlete-level outcomes.

Transformation leaders lift and inspire followers to exceed expectations and reach their full potential (Newland, Newton, Podlog, Legg, & Tanner, 2015). According to Avolio and Bass (2004), transformational leadership is a form of leadership that occurs when leaders expand and enrich the capacity of those whom they lead. Based on Bass and Riggio (2006),

four key dimensions of transformational leadership have been identified. First, idealized influence represents being an exemplary role model by treating followers fairly and equally, and engaging in ethically appropriate conduct. Second, inspirational motivation involves motivating others to commit and work towards a clear vision, and to perform beyond their normal level. Third, intellectual stimulation is about challenging normal practices and advancing invention and creativity in followers. Finally, individual consideration refers to treating followers on an individual basis by seeking to understand and address the needs of each individual. As such, transformational leadership can be represented by these four primary dimensions.

In sport, research with adolescent athletes has shown coach transformational leadership behaviour predicts athlete outcomes at both an individual and team level (Price & Weiss, 2013). For example, a coach's transformational leadership behaviour has been positively correlated with satisfaction with the coach and the effort that athletes give during training (Rowold, 2006), as well as increased satisfaction and commitment (Saybani, Yusof, Soon, Hassan & Zardoshtan, 2013). Further, transformational leadership behaviour has been linked to the improved effort (Kirkpatrick & Locke, 1996), higher levels of self-efficacy (Kark, Shamir, & Chen, 2003), enhanced satisfaction (Hater & Bass, 1988; Koh, Steers, & Terborg, 1995) and task performance (Kirkpatrick & Locke, 1996; Sosik, Avolio, & Kahai, 1997). Finally, empirical research has revealed transformational leadership has been linked with skill development and motivation beyond expected levels (Jung & Sosik, 2002). Thus, transformational leadership with a wide range of desirable athlete outcomes, and within this current study, we expect coaches' utilization of transformational leadership behaviours to be linked with key athlete outcomes.

Athletes' perceptions of their coach's transformational leadership behaviours may influence such athlete outcomes by influencing athlete perceptions of their coach's effectiveness. One theoretical framework that has proved useful in aiding our understanding of coaching effectiveness is the coaching efficacy model (Feltz, Chase, Moritz, & Sullivan, 1999). Based upon this framework, researchers have defined coaching effectiveness as the extent to which coaches can implement their knowledge and skill to positively affect the learning and performance of the athletes they coach (Boardley, Kavussanu, & Ring, 2008;

Kavussanu, Boardley, Jutkiewicz, Vincent, & Ring, 2008). Feltz et al. (1999) described four sub-dimensions of coaching efficacy: motivation effectiveness relates to athletes' ratings of their coach's ability to develop the psychological skills and motivational states of the athletes they coach; game strategy effectiveness represents athletes' assessments of their coach's ability to lead and coach athletes to a successful performance during competition; technique effectiveness concerns athletes' evaluations of their coach's instructional and diagnostic abilities; and finally, character-building effectiveness pertains to athletes' perceptions of their coach's ability to influence athletes' personal development and positive attitudes toward the sport. Importantly, this dimensionality has been supported when researchers assess athletes' perceptions of their coach's effectiveness (Boardley et al., 2008; Kavussanu et al., 2008).

Specific dimensions of coaching effectiveness can be conceptually linked with aspects of transformational leadership behaviour. For example, coach individual consideration behaviours may increase perceptions of coach motivation effectiveness. Specifically, when a coach considers athletes on an individual basis by addressing his/her individual needs, athletes are likely to perceive such coaches as more effective in motivating and psychologically preparing them. Further, coaches seen to be engaging more frequently in appropriate role model behaviours may well be seen as more effective in character building. More precisely, athletes who consider their coach treats them fairly and equally and engages frequently in behaviours reflective of an exemplary role model is likely to be seen as effective in positively influencing athletes' personal development and attitudes toward the sport. Although plausible, such links between transformational leadership behaviours and perceptions of coaching effectiveness have not been tested empirically to date.

Given perceptions of coaching, effectiveness is proposed to be based on athletes' perceptions of their coach's behaviour (see Horn, 2008), and that transformational leadership behaviour and perceptions of coaching effectiveness have been linked with similar athlete outcomes, it is possible transformational leadership behaviours influence such outcomes through changes in athletes' perceptions of their coach's effectiveness. For instance, athletes' perceptions of their coach's idealized influence behaviour may impact athletes' antisocial behaviour (i.e., behaviour intended to harm or disadvantage another player; Sage, Kavussanu, & Duda, 2006) via changes in their perceptions of their coach's character-building

effectiveness. This possibility is supported by propositions that coaches who demonstrate idealized influence behaviour would be expected to treat athletes fairly and equally and engage in frequent prosocial and infrequent antisocial conduct (see Turnnidge & Côté, in press). In turn, such behaviours would be expected to bolster athletes' perceptions of their coach's ability to positively influence athletes' personal development and positive attitudes toward the sport, therefore heightening perceptions of character-building effectiveness (see Boardley et al., 2008). In support of this, Boardley and Kavussanu (2009) found athletes' perceptions of their coach's character-building competency negatively predicted athletes' antisocial behaviour towards teammates and opponents. Thus, athletes' perceptions of their coach's character-building effectiveness may mediate a negative effect of their coach's idealised influence behaviour on antisocial behaviour. Similarly, athletes' perceptions of their coach's motivation effectiveness may mediate a positive predictive effect of individual consideration behaviour on trust (i.e., when the leader have similar perspectives with the follower, trust should be associated with the nature of their relationship (Yang & Mossholder, 2010; Whitener, Brodt, Korsgaard, & Werner, 1998). Specifically, coaches who are perceived to frequently seek to understand and address the needs of individual athletes may be more likely to be perceived as effective in psychologically preparing their athletes and establish a strong relationship with them, which should, in turn, lead to increased levels of trust (i.e., see McAllister, 1995). In support of this proposition, both transformational leadership behaviour (Kirkpatrick & Locke, 1996; Podsakoff, Mackenzie, Moorman, & Fetter, 1990) and leader effectiveness (Bass, 1990; Hogan, Murphy, & Hogan, 1994) have previously been positively linked with trust. Thus, perceptions of their coach's motivation effectiveness may mediate a positive effect of athletes' perceptions of their coach's individual consideration behaviour on trust.

The current research

The overarching aim of the present study was to investigate whether athletes' perceptions of their coach's effectiveness mediated predictive effects of perceptions of their coach's transformational leadership behaviours on key athlete-level outcomes. Specifically, the study sought to determine whether athletes' perceptions of their coach: (a) character building effectiveness mediated an effect of perceptions of coach appropriate role model behaviour on

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athlete antisocial behaviour and (b) motivation effectiveness mediated an effect of coach individual consideration behaviour on trust. Moreover, the study aimed to address these aims across time, specifically hypothesising that athletes' perceptions of their coach's: (a) character building effectiveness at Time 1 would mediate a negative effect of perceptions of coach appropriate role model at Time 1 on antisocial opponent behaviour at Time 2, (b) character building effectiveness at Time 1 would mediate a negative effect of perceptions of coach appropriate role model behaviour at Time 1 on antisocial teammate behaviour at Time 2 and (c) motivation effectiveness at Time 1 would mediate a positive effect of perceptions of coach individual consideration behaviour at Time 1 on trust at Time 2 (Boardley et al., 2008; Horn, 2008; Kark & Shamir, 2002; Kavussanu et al., 2008; Zue & Akhtar, 2014).

METHOD

Participants

A total of 174 team-sport athletes (Rugby = 35; Basketball = 46; Football = 93) participated in the study. The sample consisted of male (n = 91) and female (n = 83) athletes competing at university (n = 171) or regional (n =3) levels. Length of time with their coaches ranged from 1 to 4 years (M =1.36, SD = .75). Athletes' age ranged from 18 to 25 years (M = 20.15, SD = 1.37) and their sport experience ranged from one to 18 years (M = 9.32, SD = 4.72). On average they spent two to 16 hours per week training / competing in their sport (M= 6.37, SD 1.97).

Measures

Coaching Effectiveness. Eleven items from the coaching effectiveness scale (Boardley et al., 2008) were used to measure athletes' perceptions of their coach's motivation (7 items) and character building (4 items) effectiveness. Athletes were asked to rate how effective their coach was for each of the items using an 11-point scale ranging from 0 *(not at all effective)* to 10 *(extremely effective)*. The stem for all items was "How effective is your coach in his/her

ability to…", and example items are "…maintain confidence in his/her players" (motivation), and "…instil an attitude of good moral character" (character building). This scale has been shown to be a valid and reliable measure in research with university athletes (e.g., Boardley et al., 2008).

Transformational Leadership.

Eight items from the Differentiated Transformational Leadership Inventory (DTLI; Callow et al., 2009) were used to measure athletes' perceptions of their coach's individual consideration (4 items), and appropriate role model (4 items) behaviours. Athletes were asked to rate each item using 5-point scale ranging from 1 (not at all) to 5 (all of the time). The stem for all items was "Our coach …" and example items are "…recognized that different athletes had different needs" (Individual consideration), and "...led by example" (appropriate role model). Vella, Oades and Crowe (2012) provided evidence for the scale's internal consistency and validity.

Trust.

A scale developed by Zhu and Akhtar (2014) was adapted to the sport context to assess athletes' trust in their coach. The scale consisted of 10 items that assess affect-based (e.g., "…my coach and I can both freely share our ideas, feeling and hopes") or cognition- based (e.g., "...my coach approaches his/her job with professionalism and dedication") trust. Items were rated using a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Zhu and Akhtar (2014) presented evidence for the scale's internal consistency and factorial validity.

Antisocial behaviour.

13 items from the Prosocial and Antisocial Behaviour in Sport Scale (PABSS; Kavussanu & Boardley, 2009) were used to measure athletes' frequency of engagement in antisocial opponent (8 items) and teammate (5 items) behaviour. Athletes were asked to rate each of the items using 5-point scale ranging from 1 (never) to 5 (very often). The stem for all items was "While playing for my team, I..." and example items are "…physically intimidated an

opponent" (antisocial behavior opponent) and "…verbally abused a teammate" (antisocial behavior teammates). Kavussanu and Boardley (2009) presented evidence for the scale's internal consistency and validity.

Procedures

Once ethical approval was gained through the University Ethics Committee, eight head coaches from teams participating in the relevant sports were contacted and provided with information about the study. All coaches agreed to provide access to training sessions to invite athletes from their teams to participate in the study, and convenient dates for data collections were agreed. Two dates were arranged for each team, coinciding with the start and middle of the competitive season (retention rate = 93.5%). Once the study had been fully described (i.e., study aims, what participation involves, confidentiality of data, right to withdraw) to the athletes and any questions answered, informed written consent was obtained. Once this was done, each participant completed a questionnaire pack containing the previously described scales measuring coaching effectiveness, transformational leadership, antisocial behaviour and trust; on average questionnaire completion took 15-20 minutes on each occasion. Completion of the questionnaire pack took place in private, away from the coach and other athletes, participants were assured their coach, and teammates would not be made aware of their responses at any time. At the end of the first collection point, players were briefed that subsequent data collection would take place 6-8 weeks after the initial collection. Following both data collections athletes were thanked.

RESULTS

Descriptive Statistics, Scale Reliabilities and Correlational Analyses

No missing score uses all information for data analyses. The skewness statistics demonstrated distribution is in the range of normality for all scales (indices for acceptable limits of ±2), (see Trochim & Donnelly, 2006; Field, 2000 & 2009; Gravetter & Wallnau, 2014), and Kurtosis statistics demonstrated distribution is in the range of normality for all scales except for trust

at time 2 demonstrated 3.38 (indices for acceptable limits of ±2), (see George & Mallery, 2010). Cronbach's (1951) Alpha coefficients and correlations for study variables at the relevant time point are presented in Table .1.1

Data were analysed using SPSS version 25.0. Cronbach's alpha values demonstrated very good to excellent levels of internal consistency for the seven subscales employed (Nunnally & Berstein, 1994). Bivariate correlations illustrated a strong correlation between athletes' perceptions of their coach's character-building effectiveness and coach's appropriate role model behaviour at Time 1. Further, there were weak-to-moderate negative correlations between perceptions of coach character building effectiveness and appropriate role model behaviour at Time 1 and antisocial opponent behaviour at Time 2. Also, there were moderate and weak-to-moderate negative correlations, respectively, between perceptions of coach character building effectiveness and appropriate role model behaviour at Time 1and antisocial teammate behaviour at Time 2. Finally, there was a strong positive correlation between perceptions of motivation effectiveness and individual consideration behaviour at Time 1 and a medium positive correlation between perceptions of motivation effectiveness at Time 1 and trust at Time 2; there was no significant relationship between perceptions of individual consideration behaviour at Time 1 and trust at Time 2.

Table 1.1: *Descriptive statistic, Alpha Coefficients, and Correlations among Variables of Athletes*

	Variables	M	SD	1	2	3	4	5	6	7
1	Motivation Effectiveness T1	7.15	1.26	*.90*						
2	Character Building Effectiveness T1	7.13	1.39	.73**	*.82*					
3	Appropriate Role Model T1	3.67	0.69	.59**	.58**	*.78*				
4	Individual Consideration T1	3.75	0.53	.55**	.49**	.65**	*.82*			
5	Trust T2	3.63	0.44	.24**	.13	.08	.12	*.77*		
6	Antisocial Opponent Behaviour T2	2.17	0.68	-.20**	-.17*	-.16*	-.13	.17*	*.82*	
7	Antisocial Teammate Behaviour T2	2.00	0.60	-.23**	-.29**	-.20**	-.08	.01	.63**	*.67*

Note. N = 174 (T2). Alpha coefficients (α) are presented on the diagonal.
**Correlation is significant at the .01 level (2-tailed). *Correlation is significant at the .05 level.

Mediation Analyses

Process for SPSS (Hayes, 2013) was used to test the mediational hypotheses of the study. First, it was hypothesized perceptions of character-building effectiveness at Time 1 would mediate the relationship between appropriate role model behaviour at Time 1 and athlete antisocial opponent behaviour at Time 2. Results showed that although appropriate role model at Time 1 significantly predicted character building effectiveness at Time 1 ($b = 1.18$, $t = 9.35$, $p < .001$), it did have a significant direct predictive effect on antisocial opponent behaviour at Time 2 ($b = -.0.09$, $t = -1.07$, $p = > .05$). However, character building effectiveness at Time 1 did not significantly predict antisocial opponent behaviour at Time 2 ($b = -.0.05$, $t = -1.16$, $p = > .05$). Further, the total predictive effect of appropriate role model at Time 1 on antisocial opponent behaviour at Time 2 was significant and negative ($b = -.15$, $t = -2.14$, $p = .03$). Finally, the indirect effect of appropriate role model at Time 1 on antisocial opponent behaviour at Time 2 via character building effectiveness at Time 1 was not significant, ($b = -.06$, 95% BCa CI [-.17, .04]). This indirect effect represents 5.1% of the maximum value it could have been, and therefore reflects an indirect effect. The $R2$ indicates that appropriate role model at time 1 explain 2.5% of the variance respectively. The main findings from these analyses are visually displayed in Figure 1

Direct effect, b = -0.09, p > 0.05
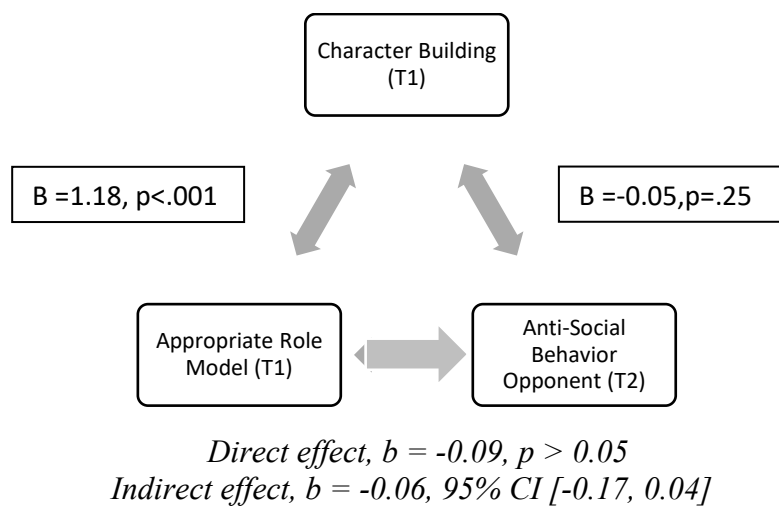*Indirect effect, b = -0.06, 95% CI [-0.17, 0.04]*

Figure 1.1
Note: Unstandardized regression coefficients or the relationship between appropriate role model (T1) and antisocial opponent behaviour (T2) mediated by character building effectiveness (T1).

Second, it was hypothesized perceptions of character-building effectiveness at Time 1 would mediate the relationship between appropriate role model behaviour at Time 1 and antisocial behaviour teammate at Time 2. Results showed that appropriate role model at Time 1 significantly predicted character building effectiveness at Time 1 (b = 1.18 t = 9.35, p < .001), and it did have a significant direct predictive effect on antisocial teammate at Time 2 (b = -.0.04, t = -0.46, p = >.05). Further, character building effectiveness at Time 1 significantly predicted antisocial behaviour teammate at Time 2 (b = -.11, t = -2.97, p = < .05). The total predictive effect of appropriate role model behaviour at Time 1 on antisocial behaviour teammate at Time 2 was significant and negative predicted, (b = -.17, t = -2.62, p = < .05). Finally, the indirect effect of appropriate role model at Time 1 on anti-social teammate at Time 2 via character building effectiveness at Time 1 was significant (b = -.13, 95% BCa CI [-.24, -.05]). The R2 value indicates appropriate role model at time 1 explain 3.8% of the variance respectively. This indirect effect being about 12.9% of the maximum value, and therefore, reflects indirect effect. The main findings from these analyses are visually displayed in Figure 1.2.
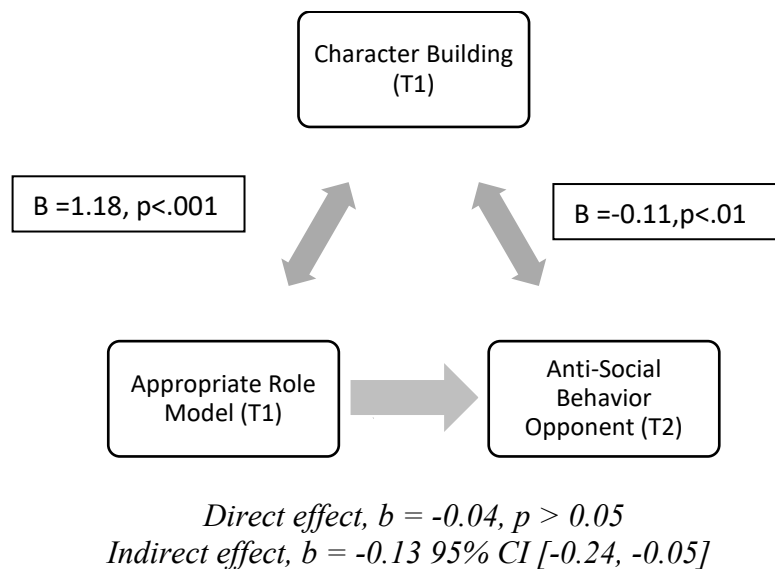

Direct effect, b = -0.04, p > 0.05
Indirect effect, b = -0.13 95% CI [-0.24, -0.05]

Figure 1.2
Note: Unstandardized regression coefficients or the relationship between appropriate role model (T1) and antisocial teammate (T2) as mediated by character building effectiveness (T1).

Finally, it was hypothesized perceptions of motivation effectiveness at Time 1 would mediate the relationship between individual consideration at Time 1 and trust at Time 2. Results

showed that individual consideration Time 1 significantly predicted motivation effectiveness at Time 1 (b = 1.28, t = 8.50, p < .001), it did have a significant direct predictive effect on trust at Time 2 (b = -.01, t = -1.77, p > = .05). Further, motivation effectiveness at Time 1 showed significant predicts trust at Time 2 (b =.09, t = 2.78, p = <.05). However, the total predictive effect of individual consideration Time 1 on trust at Time 2 was not significant predicted (b =.09, t = 1.56, p > =.05). Finally, the indirect effect of individual consideration Time 1 on trust Time 2 via motivation effectiveness Time 1 was significant effect (b =.11, 95% BCa CI [.03, .23]). The R2 value indicates individual consideration at time 1 explain 1.4% of the variance respectively. This indirect effect being about 11.4% of the maximum value, and therefore, reflects indirect effect. The main findings from these analyses are visually displayed in Figure 1.3.
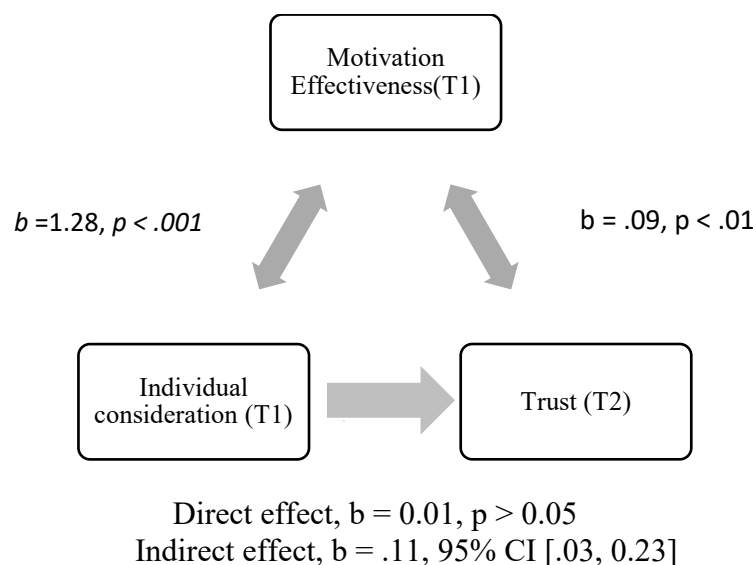

Direct effect, b = 0.01, p > 0.05
Indirect effect, b = .11, 95% CI [.03, 0.23]

Figure 1.3
Note: Unstandardized regression coefficients or the relationship between individual consideration (T1) and trust (T2) as mediated by motivation effectiveness (T1).

DISCUSSION AND CONCLUSION

Transformational sport coaches inspire their athletes by espousing ideal behaviour, showing care, formulating and communicating a vision, and such behaviours should facilitate optimal learning and development in athletes (see Rowold, 2006; Vella, Oades, & Crowe., 2013). As such, coaches engaging in such behaviours should be viewed as more effective than coaches

who do not. Thus, drawing upon the conceptual arguments of Callow et al (2009), Côté and Gilbert (2009), Feltz et al. (1999) and Horn (2008), in the current study we sought to investigate whether key aspects of coaching effectiveness mediated predictive effects of associated dimensions of transformational leadership behaviour on relevant athlete outcomes in team-sport athletes. Over the following paragraphs, we review and discuss the findings from this research.

First, the present study aimed to examine whether athletes' perceptions of their coach's character-building effectiveness at Time 1 mediated a negative effect of perceptions of coach appropriate role model behaviour at Time 1 on athlete antisocial opponent behaviour at Time 2. However, contrary to the relevant hypothesis, a significant mediated effect was not identified. When looking at the two paths involved in the proposed mediational effect, there was a significant effect for the first of these. Specifically, there was a significant positive effect of athletes' perceptions of their coach's appropriate role behaviour on their perceptions of their coach's character-building effectiveness. Thus, coaches who were seen more frequently to lead by example and in an ethically appropriate manner were viewed as being more adept at influencing athletes' personal development and positive attitudes toward sport. But, the second of the two paths from perceptions of character-building effectiveness to antisocial opponent behaviour although in the anticipated direction, did not prove significant. Interestingly, past research has shown inconsistent effects for athlete perceptions of character building on antisocial behaviour, with some studies showing the anticipated negative effect (e.g., Boardley & Kavussanu, 2009) whereas others have not (e.g., Boardley et al., 2008). The inconsistent effects of this dimension on antisocial behaviour have recently been attributed to the character-building dimension being overly focussed on the promotion of positive social behaviours (e.g., prosocial behaviour) and less so on the deterrence of negative social behaviours (e.g., antisocial behaviour; see Boardley, in press). As such, it may be that character-building effectiveness – as assessed here – does not sufficiently capture athletes' perceptions of their coach's capabilities to deter detrimental conduct toward opponents, leading to the weak and non-significant path between these two variables.

Second, we hypothesized athletes' perceptions of their coach's character-building effectiveness at Time 1 would mediate a negative predictive effect of their perceptions of their

coach's appropriate role model behaviour at Time 1 on their antisocial teammate behaviour at Time 2. Consistent with the relevant hypothesis, mediational analyses supported the presence of this effect. Thus, athletes who perceived their coach to engage more frequently in behaviours reflective of an ideal role model engaged less frequently in harmful behaviours toward their teammates, and this effect was partially explained through perceptions of their coach's ability to promote athletes' personal development and positive attitudes toward sport. This finding contrasts with that for antisocial opponent behaviour, suggesting the presence of a key distinction between the explanatory pathways leading to these two types of antisocial behaviour. More specifically, it seems athletes link coaches' abilities to influence athletes' development and positive attitudes with antisocial behaviour toward teammates more strongly than they do antisocial behaviour toward opponents. As such, it may be that athletes view harmful behaviour toward teammates as more morally reprehensible than that towards teammates. Support for such differences can be found in research on social identity (i.e., the portion of one's self-concept derived from membership in a social group; Tajfel & Turner, 1986), which suggests increases in social identity can lead to favourable moral behaviours towards those in the in-group (i.e., one's teammates) compared to the out- group (i.e., one's opponents; see Bruner, Boardley, & Côté, 2014). Given this, it may be that in team sport athletes view antisocial behaviour towards in-group members (i.e., teammates) as more morally reprehensible than they do equivalent behaviours towards the out-group (i.e., opponents). Thus, when integrated, the findings relating to our first two hypotheses suggest athletes' perceptions of their coach's character building may mediate the effects of perceptions of coach appropriate role model behaviour on antisocial behaviour towards teammates but not opponents.

Third, we hypothesized athletes' perceptions of their coach's motivation effectiveness at Time 1 would mediate a positive effect of their perceptions of their coach's individual consideration behaviour at Time 1 on trust in their coach at Time 2. Consistent with the related hypothesis, data analyses supported the presence of this indirect effect. Thus, when athletes perceived their coach to more frequently treat athletes on an individual basis by understanding and addressing their specific needs, they were perceived as being more efficacious in psychologically preparing athletes, and this perception partially explained increased levels of trust in the coach. Whilst past research has demonstrated transformational leadership is linked

with increases in athlete motivation, team cohesion, performance, collective efficacy, well-being and intra-team communication (see Arthur, Woodman, Ong, Hardy, & Ntoumanis, 2011; Callow et al., 2009; Charbonneau et al., 2001; Price et al, 2013; Rowold, 2006; Smith, Arthur, Hardy, Callow, & Williams, 2013; Stenling, & Tafvelin, (2014), research to date has not linked it with increased coach trust. Similarly, previous research has not linked perceptions of motivation effectiveness with coach trust. The current research not only extends the literature by linking heightened individual consideration behaviour and perceptions of motivation effectiveness with increased trust in the coach, but also proposes and supports a possible indirect pathway linking these three variables. Thus, it may be that coaches who are able to demonstrate understanding and meet athletes' individual needs for growth and development stimulates a strong coach-athlete relationship represented in motivation effectiveness, which in turn stimulates athletes' trust in their coach. This possibility is supported by research that has shown feelings of being valued in a relationship are often reciprocated through changes in psychological states such as trust (see Colquitt, LePine, Piccolo, Zapata, & Rich, 2012; Lapidot, Kark, & Shamir, 2007).

In conclusion, the current study established links between athlete perceptions of coach transformational leadership behaviour and athlete outcomes, mediated by athlete perceptions of coaching effectiveness. In doing so, it provided support for the relevance and integration of a number of conceptual frameworks across a range of team sports. Specifically, the study drew upon and integrated key tenets of the coaching efficacy model (Feltz et al., 1999), Horn's (2008) model of coaching effectiveness and transformational leadership theory (Bass & Avolio, 1994). The study also provides support for many of the propositions in Boardley's (in press) recent revised conceptual model of coaching efficacy. Thus, the study findings contribute to our understanding of the psychological processes through which coaching behaviour may influence important athlete outcomes in team sport.

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