The Role of Authentic Leadership on Athlete Outcomes

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Abstract

Authentic leadership is a form of leadership which has received a relatively limited amount of research in sport despite the suggestion that it may be related to numerous positive outcomes in athletes. We conducted a study in sport in order to investigate proposed relationships between authentic leadership and athlete outcomes. Specifically, we investigated whether coaches' authentic leadership is related to athletes' achievement and moral outcomes via trust and the culture of the team. Data were collected via questionnaires. The design was a cross-sectional study with 366 (240 females, $M_{age} = 21.07$) team sport athletes. Authentic leadership was positively related to athletes' trust and team culture. Authentic leadership was also positively related to athletes' commitment, positive affect and perceptions of their teammates' prosocial behaviours, via trust and team culture. Our findings enhance our understanding of authentic leadership in sport and highlight its importance in predicting crucial positive athlete outcomes.

Keywords: coaches, commitment, positive affect, trust, culture

The Role of Authentic Leadership on Athlete Outcomes

The concept of leadership has been intriguing sports psychologists from as early as the 1950s (Smoll & Smith, 1989). Given the social nature of sport, leaders are seen as highly influential within sports environments and can impact on followers' development, emotions, and morality (Vella et al., 2013). As such, several models of leadership have been proposed within sport. Recently, models of leadership have begun to focus on the relationships leaders develop, and interactions they have with their followers (O'Boyle et al., 2015). One such model of leadership which focuses on relationships and interactions leaders have with their followers, and is highly applicable to sports environments, is authentic leadership, as defined by Walumbwa et al. (2008). Models of authentic leadership suggest it may be positively related to several desirable outcomes in athletes. These outcomes could help to promote more positive sports environments and continued sport participation, however despite this authentic leadership has received little attention in sport thus far. This study aims to address gaps in the literature by investigating the relationships between authentic leadership and a range of athlete outcomes.

Authentic Leadership

Authentic leadership is centred around the idea of authenticity which comes from ancient Greek philosophy, referring to "to thine oneself be true" (Harter, 2002). It is considered a genuine form of leadership whereby leaders' behaviours are in line with their values (Endrissat et al., 2007). Many definitions of authentic leadership exist, however for this study we focus on Walumbwa et al.'s. (2008) definition as this integrates previous definitions of authentic leadership (e.g., Gardner et al., 2005; Ilies et al., 2005), to suggest that authentic leadership is a multidimensional construct, which goes beyond being true to oneself, and incorporates both a moral and developmental dimension, as well as four key components: self-awareness, relational transparency, internalized moral perspective, and balanced processing.

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Self-awareness refers to how leaders understand their inner values, strengths and weaknesses, and therefore who they are (Avolio et al., 2004; Walumbwa et al., 2008). One cannot be considered authentic unless one is fully aware of oneself and so high levels of self-awareness are key to authentic leadership (Ilies et al., 2005). Relational transparency pertains to authentic leaders being open with their followers through showing their true self, which results in trusting relationships (Kernis, 2003; Walumbwa et al., 2008). Authentic leaders demonstrate transparency by showing consistency between their values, behaviours and emotions, as well as through telling their followers the hard truth and admitting to when they make mistakes. Internalized moral perspective suggests authentic leaders have high moral standards which influence their moral behaviours, rather than their moral behaviours being guided by external pressures (Avolio & Gardner, 2005). Authentic leaders engage in ethical decision-making and ask their followers to do the same. Internalized moral perspective also suggests that authentic leaders are able to express where they stand on controversial issues (Walumbwa et al., 2008). Finally, balanced processing suggests authentic leaders take into account all available information, including their followers' perspective, before coming to an objective decision. Often this involves authentic leaders being willing to consider alternative points of views (Walumbwa et al., 2008).

Walumbwa et al. (2008) suggests that in addition to the four key components, authentic leadership is also made up of two key dimensions: a moral dimension and a developmental one. The moral component suggests that authentic leaders have a highly developed moral character which is reflected in them having high ethical standards and demonstrating moral behaviours. Whilst the developmental component suggests that authentic leaders are concerned with developing open and transparent relationships with their followers, and are highly interested in their followers' development. This developmental component is expected to instil high levels of trust and result in positive developmental outcomes for followers. The multidimensional nature

of authentic leadership and the influence that it places on the relations leaders have with their followers suggest that it is a highly relevant model of leadership in sport. This is because sports environments are influenced by contextual factors such as leaders and the relationships followers have with their leader. Walumbwa et al. (2008) state that any research into authentic leadership would be incomplete if it did not examine the four components of authentic leadership, morality, and follower relationships. As such, in this study, based on Walumbwa et al.'s (2008) definition of authentic leadership and models of authentic leadership, we examined the influence of authentic leadership on trust, team culture, and several athlete outcomes, as will be discussed in detail in the following sections.

Trust and Team Culture

Due to the focus that authentic leaders place on developing relationships with their followers and through displaying relational transparency, a key variable that authentic leadership is likely to effect is trust (Avolio & Gardner, 2005). Trust in one's leader is defined as being able to rely on your leader and believing that they have good intentions for the team (Dirks, 2000). Models of authentic leadership (i.e., Avolio et al., 2004; Gardner et al., 2005; Ilies et al., 2005) proposed several mechanisms in which authentic leaders are likely to instil trust in their followers. Firstly, authentic leaders are believed to influence followers' trust as they are credible and genuine leaders which leads followers to identify with their leader (Avolio et al., 2004). Secondly, authentic leaders may also instil greater trust in their followers by demonstrating high moral standards and showing moral behaviours (Gardner et al., 2005; Ilies et al., 2005). Finally, authentic leaders can instil trust in followers as a result of the positive modelling of authentic behaviours and values (Gardner et al., 2005; Ilies et al., 2005). Trust in turn is expected to indirectly affect the relationship between authentic leadership and follower outcomes (Avolio et al., 2004; Gardner et al., 2005).

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The positive relationship between authentic leadership and trust has been supported by several studies in the business domain and in sport (e.g., Bandura & Kavussanu, 2018; Bandura et al., 2019; Clapp-Smith et al., 2009). One study found that authentic leadership led to followers showing greater trust towards their leader (Clapp-Smith et al., 2009). A study in sport found that authentic leadership was positively related to trust (Houchin, 2011). A further study in sport found that authentic leadership was positively correlated with trust which mediated the relationship between authentic leadership and athlete outcomes (Bandura & Kavussanu, 2018).

Once trusting relationships are established between the authentic leader and their followers, positive team cultures are also expected to be created. Higgins-D'Alessandro & Sadh (1998) define culture as individuals' perception of their team environment and suggest that it is made up of normative expectations, leader/team relationships, follower relationships, and educational opportunities. Gardner et al. (2005) proposed that authentic leaders are likely to create positive team cultures by being open with their followers, providing their followers with opportunities, being concerned with their development and by creating trusting relationships with their followers. Over time, this is expected to form the culture of the team (Gardner et al., 2005). The authentic culture created by coaches can further enhance high quality relationships and connections amongst followers, which enable the inclusive environments created by the authentic leaders to be sustained over time, further establishing a positive team culture (Gardner et al., 2005). Avolio and Gardner's (2005) model further suggests that authentic leaders are more likely to create inclusive environments, characterised as being built on positive affect and trust, by creating positive relationships with followers. They suggest these environments support followers and empower them to develop through encouraging the open sharing of information. In this study, the terms team climate and team culture will be used interchangeably.

The relationship between authentic leadership and team culture has not yet been investigated in a sporting context. However, research in nurses showed that authentic leadership

led to positive climates and healthy work environments, defined as supportive, joyful, and patient-focused (Nelson et al., 2014; Shirey, 2006). In addition, over a 22-month period, authentic leadership was found to be capable of creating positive climates, characterized by trust, integrity, and support (Kinnuen et al., 2016). The researchers theorised that this occurred as a result of authentic leaders acknowledging their followers' perspective, demonstrating moral values, and by demonstrating an awareness of their strengths and weaknesses. Although these studies measured team climate in slightly different ways, they are conceptually similar to Higgins-D' Alessandro and Sath (1998) definition of culture, as they focused on the trusting relationships leaders have with their followers and the perceived opportunities given by the leader. In summary, authentic leadership is expected to result in trusting relationships and positive team climate which in turn, may lead to positive follower outcomes (e.g., Avolio et al., 2004; Walumbwa et al., 2008). We will now discuss these outcomes.

Commitment, Positive Affect and Prosocial Behaviour

According to several models of authentic leadership, authentic leaders are believed to indirectly influence follower outcomes such as positive affect, commitment, and prosocial behaviours, via trust and team culture (Avolio & Gardner, 2005; Gardner et al., 2005). Commitment is defined as a “psychological construct representing the desire and resolve to continue sport participation” (Scanlan, 1993, p. 6), while positive affect is an aspect of wellbeing and is considered the experience of pleasant emotions or moods (Diener & Suh, 1997). Theorists suggest authentic leaders are expected to promote positive affect and commitment in followers through several mechanisms: Firstly, they may do this directly by spreading their own positive emotions to their followers; or secondly they may do this indirectly by creating trusting relationships with their followers and positive team cultures which enable followers to feel more secure (Ilies et al., 2005; Walumbwa et al., 2008). The potential indirect roles of trust and team culture on commitment and positive affect has been supported by several scholars in the business

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or nursing domain (Leroy et al., 2012; Nelson et al., 2014; Peus et al., 2012). A cross-sectional study in sport also found that authentic leadership was indirectly related to athletes' commitment via trust (Bandura & Kavussanu, 2018). In summary, authentic leadership may increase followers' positive affect and commitment, via creating trusting relationships and supportive team cultures.

Another variable which authentic leadership is believed to influence is followers' prosocial behaviours. In the context of sport, prosocial behaviour has been examined as "voluntary behaviour intended to help or benefit another individual" (Kavussanu & Boardley, 2009, p. 99). Walumbwa et al.'s. (2008) suggests authentic leadership could promote more prosocial behaviours amongst followers due to its highly developed moral component. This moral component is reflected in authentic leaders demonstrating moral behaviours in line with their moral values and thus serving as moral exemplars to their followers. According to models of authentic leadership, authentic leaders are also capable of influencing followers' prosocial behaviours indirectly through creating trusting relationships, role modelling, and by establishing a team norm to act morally, thus creating an authentic moral team culture (i.e., Gardner et al., 2005; Ilies et al., 2005). As such, through authentic leadership promoting higher trust and team cultures, followers of authentic leaders would be expected to show more prosocial behaviours. While no research has examined these proposed relationships in sport, support has been provided by a study conducted in a military setting which found that authentic leadership was positively related to soldiers' prosocial behaviours common in a military setting (e.g., demonstrating responsible behaviour, considering soldiers' impact on others and putting the good of the group ahead of their own self-interest; Hannah et al., 2011). In summary, authentic leadership may increase followers' prosocial behaviours, via creating trusting relationships and positive team cultures.

Current Investigation

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In summary, authentic leaders may influence followers' commitment, positive affect, and teammate prosocial behaviour by creating trusting relationships and positive team cultures (e.g., Clapp-Smith et al., 2009; Hannah et al., 2011). However, currently only three studies have been conducted on authentic leadership in sport, which found authentic leadership to be positively related to athletes' trust, commitment, and enjoyment (e.g., Bandura et al., 2019; Bandura & Kavussanu, 2018; Houchin, 2011). Despite this, authentic leadership is highly relevant to sporting contexts, given its focus on leader-follower relationships and follower development, and could therefore be key to creating more positive sports environments and positively impacting on athletes' development. Given that coaches are highly influential within sports environments, investigating beneficial forms of leadership are vital within sport. Thus, investigating authentic leadership in sport could be very valuable in expanding the sports coaching literature (O'Boyle et al., 2015). Furthermore, despite the suggestion that authentic leadership may positively influence team culture, athletes' perception of their teammate's prosocial behaviours, and positive affect, this has yet to be investigated in sport. However, these variables are important in promoting continued participation in sport, which is vital given the proposed 35% drop in sports participation with age (Gould, 1987). Furthermore, given the social nature of sport, coaches play an important role in influencing athletes' moral behaviours. Therefore, investigating whether authentic leadership will promote more prosocial behaviours amongst athletes could help to address immoral behaviours in sport.

This research will fill these gaps in the literature. We conducted a cross sectional in order to investigate the proposed relationships between authentic leadership and follower outcomes, as suggested by models of authentic leadership and studies conducted in domains outside of sport. Its purpose was to investigate the relationship between authentic leadership and athletes' trust, team culture, commitment, positive affect, and prosocial behaviours. We hypothesized that authentic leadership would be positively and indirectly related to athletes' commitment, positive

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affect, and perceived teammate prosocial behaviours, (e.g., Cianci et al., 2014; Hannah et al., 2011; Ilies et al., 2005) via trust and team culture (e.g., Bandura & Kavussanu, 2018; Nelson et al., 2014; Kinnuen et al., 2016). We recruited team sport athletes and focused on team sports because leaders are highly influential within team environment and because team culture and prosocial behaviours are important within this context (Jowett & Chaundry, 2004).

Method

Participants

Athletes ($n = 366$; 240 females, 65.6%) from 22 sport teams that competed in university leagues or in external leagues at a regional level participated in the study. The sports were lacrosse ($n = 120$, 33%), field hockey ($n = 80$, 22%), football ($n = 47$, 13%), hockey ($n = 30$, 8%), netball ($n = 25$, 7%), basketball ($n = 21$, 6%), rugby union ($n = 20$, 5%), American football ($n = 18$, 5%), and athletics ($n = 5$, 1%, athletics was included as a team sport as the athletes competed as a team). At the time of data collection, participants had an average age of 21.07 ($SD = 5.16$), had played their sport for an average of 7.74 years ($SD = 5.97$), and had been with their teams for an average of 1.68 years ($SD = .78$). The selection criteria for the participants were that they must participate in a team sport and have been playing with their coach and team for a year or more so that the influence of the leader would be apparent.

Measures

Authentic leadership. Athletes' perceptions of their coach's level of authentic leadership was measured using the Authentic Leadership Questionnaire (ALQ, Walumbwa et al., 2008). The ALQ consists of 16 items, which encompass the four components of authentic leadership using four subscales including, self-awareness (e.g., "my coach seeks feedback to improve interactions with others"), relational transparency (e.g., "my coach says exactly what he or she means"), internalized moral perspective (e.g., "my coach demonstrates beliefs that are consistent with actions") and balanced processing (e.g., "my coach listens carefully to different points of

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view before coming to conclusions”). Participants are asked to think about their experiences with their coach and respond using a 5-point scale with 1 corresponding to “not at all” and 5 corresponding to “frequently if not always.” This scale was found to have good reliability as shown by the Cronbach alphas of .79 (self-awareness), .72 (relational transparency), .73 (internalised moral perspective), and .76 (balanced processing; Walumbwa et al., 2008).

Trust. Athletes rated their perceived levels of trust using the Trust Questionnaire developed by Dirks (2000). This scale consists of nine items, example items include “I trust and respect my coach” and “other players consider my coach to be trustworthy”. Participants are asked to think about their experiences with their coach this season and circle an appropriate answer using a 7-point Likert scale, with 1 representing “strongly disagree” and 7 “strongly agree”. This scale was found to be reliable as shown by a Cronbach alpha of .96 (Dirks, 2000).

Team culture. Athletes’ perceptions of their team culture were measured using an adapted version of the School Culture Scale (SCS; Higgins-D’Alessandro, & Sadh, 1998). The original scale is made up of four subscales however for our study any items which could not be adapted to a sport environment were removed, leaving a 14-item questionnaire. The wording of the questionnaire was also changed so that “teacher” became “coach” and “students” became “athletes.” The remaining subscales included in our study were: teacher/school relationships (e.g., “athletes generally treat each other with respect and fairness”), athlete relationships (e.g., “coaches generally treat their athletes with respect and fairness”) and educational opportunities, (e.g., “athletes learn how to listen to other people’s ideas better”). We chose to include this measure of team culture as it closely relates to authentic leadership theory, with authentic leaders being expected to be concerned with their followers’ development by providing opportunities, and by the focus authentic leaders place on developing relationships with their followers (Gardner et al., 2005). This scale has been found to be reliable as shown by Cronbach alphas of .85 (Higgins-D’Alessandro, & Sadh, 1998).

Positive affect. Positive affect was measured using the positive affect subscale of the Positive and Negative Affect Scale (PANAS, Crawford & Henry, 2004). Participants were asked to read seven items (i.e., “interested, excited, enthusiastic, inspired, determined, attentive and strong”) and rate the extent to which they had felt those emotions in the past few weeks, using a 5-point scale with 1 meaning “very slightly or not at all” and 5 meaning “very much.” This scale has been found to be reliable ($\alpha = .89$; Crawford & Henry, 2004).

Commitment. Athletes’ ratings of their commitment were measured using a scale from the Sport Commitment Model (Scanlan et al., 1993). This scale consists of four items (e.g., “How hard would it be for you to quit playing for this team”). Participants are asked to think about their experiences in their team and circle the most relevant number using a 5-point Likert scale, with 1 corresponding to “not at all committed” and 5 corresponding to “very dedicated.”

Perceived teammate prosocial behaviours. Athletes indicated their perception of the frequency of their teammates prosocial behaviours using the Prosocial and Antisocial Behaviours in Sport Scale (PABSS, Kavussanu & Boardley, 2009). An adapted version of the subscale was used, as in Al-yaaribi et al. (2016). The wording was then changed so that the scale was measuring athletes’ perceptions of their teammate’s prosocial behaviours towards themselves rather than measuring how often athletes themselves engage in prosocial behaviours towards their teammates. This was because authentic leaders are expected to change team norms and so it would be expected to increase the team’s frequency of prosocial behaviours. The stem was changed to “this season, my teammates.” This scale consists of five items (e.g., “Congratulated me for good play”) and uses a five-point Likert scale with 1 corresponding to “never” and 5 corresponding to “very often.” A Confirmatory Factor Analysis (CFA) found this adapted scale to have good model fit as shown by factor loadings ranged from .60 to .85, as well as good reliability as demonstrated by Cronbach alpha of .87 (Al-yaaribi et al., 2016).

Procedure

Before conducting the study, ethical approval was received from the university ethical committee. We then contacted the teams' coaches, via email or phone, and asked whether their athletes could take part in the study and informed consent was obtained. After a date and time for data collection was arranged, the questionnaires were administered to the athletes before or after a training session, in the same place as their normal training session. Data was collected towards the end of a regular university season, over two months (between February and March). The order of the measures in the questionnaire was counterbalanced to avoid order effects and took 10-15 minutes to complete. The researcher remained present at all times to answer any questions.

Data Analyses

Firstly, preliminary data analysis was conducted to examine any missing data and to calculate the Cronbach alphas for the different scales, using the Statistical Program for Social Sciences (SPSS v. 25). An Exploratory Factor Analysis (EFA) was then conducted to examine the factorial structure of the scales, as the main data analysis involved path analysis. The EFA results revealed some problematic measures, which were further examined using a second EFA and principal-axis factor extraction to determine the appropriate number of factors to retain for each of the problematic measures. The EFA results have been included in the supplementary material. Descriptive statistics and correlations were then computed.

For the main analysis, a multilevel path analysis was conducted using MPlus, to test whether coach authentic leadership was related to athletes' commitment, positive affect and athletes' perceptions of their teammates' prosocial behaviours via trust and team culture. A multilevel approach was used in order to capture the nested nature of the data (as a result of participants being nested in teams), while simultaneously testing multiple indirect links proposed in a theoretical model. The primary relationships and the indirect effects were tested at both the lower (athlete/within level) and higher level (team/between level). Group mean centering was

used at the within level, so as to not confound the within and between cluster variations (Enders & Tofighi, 2007).

Results

Preliminary Data Analysis, Alpha Coefficients, Descriptive Statistics, and Zero-Order Correlations

Preliminary data analysis revealed the data to be normally distributed according to the Shapiro-Wilk test and visual inspection of the histograms, Q-Q plots and boxplots. Missing data on the individual items ranged from 0 to 0.8% and were found to be missing at random. Therefore, because only a small percentage of the data was missing, any missing data was replaced with the mean of the variable (Acock, 1997; Cohen & Cohen, 1983; Tabachnick & Fidell, 2001). Mplus multilevel path analysis is not influenced by missing data. The Cronbach alpha scores of the variables ranged from excellent to acceptable as suggested by George and Mallery (2003) ($> .9$ – Excellent, $> .8$ – Good, $> .7$ – Acceptable). Table 1 displays the reliabilities, descriptive statistics, and correlations among the study variables.

Main Data Analysis

Firstly, a null model was run in order to calculate the Intra Class Correlations (ICC) for the variables. The ICC values for the variables were over .05, (authentic leadership = .16, trust = .16, team culture = .07, commitment = .20, prosocial behaviour = .05, positive affect = .13), which is the cut-off point to indicate there is significant between-group variance; suggesting differences seen across the subjects are likely due to group differences, and therefore multilevel modelling was an appropriate method to use (Muthén, 1991, 1994; Yuan & Lin, 2006).

As seen in Figure 1 (A path) and Table 2, the multilevel path analysis revealed that, at the within level (athlete level), authentic leadership was significantly related to trust and team culture. Trust and team culture were investigated at the within level only, as no significant relationships were observed at the between level. Trust was significantly related to commitment,

positive affect and athletes' perceptions of their teammates' prosocial behaviour. Team culture was significantly related to commitment and positive affect (B path). Indirect effects of authentic leadership using the Bayesian estimation were then tested. This is the appropriate method to use when data are missing at random (which was the case here) and for testing a wide range of mediation models, such as when there are multiple variables and indirect effects (Enders et al., 2013). We found significant indirect effects of authentic leadership on positive affect and commitment through trust and team culture, and a significant indirect effect of authentic leadership on perceived prosocial behaviours through trust.

Discussion

Over the past decade, numerous studies have been conducted on the impact of leadership in sport, due to the importance coaches are believed to have within these environments. Authentic leadership has received little research in sport today, however it is believed to be highly applicable to a sports environment, due to its focus on relationships, moral values and follower development. As such, authentic leadership is expected to lead to positive outcomes in athletes which could help address issues with sports participation and immoral behaviours in sport (e.g., Bandura et al., 2019; Bandura & Kavussanu, 2018; Houchin, 2011). Previous research in sport has found authentic leadership to be positively related to athletes' trust, commitment, and enjoyment, however the models of authentic leadership and studies conducted in other domains, suggest that authentic leadership may also influence other variables, such as team culture, prosocial behaviours and positive affect, which has yet to be explored within sport. The present study sought to fill this gap in the literature by examining whether authentic leadership is related to athletes' commitment, positive affect and perceived teammate' prosocial behaviours via trust and team culture.

In support of our hypothesis, authentic leadership was related to athletes' commitment, positive affect, and athletes' perceptions of their teammates' prosocial behaviours via trust and

team culture. The indirect role of trust and team culture on the relationship between authentic leadership and followers' commitment are in line with previous studies conducted within sport and other contexts and with similar variables (e.g., Bandura & Kavussanu, 2018; Clapp-Smith et al., 2009; Nelson et al., 2014). Specifically, the significant positive relationship between authentic leadership and athlete trust is in line with studies such as Clapp-Smith et al. (2009) and Bandura and Kavussanu (2018) who also found a positive relationship between authentic leadership and trust. Similarly, the relationship between authentic leadership and team culture is in line with studies conducted in other domains to sport with similar variables (e.g., Kinnuen et al., 2016; Nelson et al., 2014). However, these studies measured work climate rather than team culture and so the results are not directly comparable.

The results of this study are the first to provide evidence of the positive relationships between authentic leadership and athlete outcomes such as team culture, prosocial behaviours, and positive affect. Taken together with previous research, our results suggest that when coaches exhibit authentic behaviours, such as being open, staying true to oneself, incorporating others opinions, and displaying moral behaviours, athletes may be more inclined to trust them, which may lead them to feel more content and create a positive team culture; this in turn may lead athletes to be more committed, experience positive emotions, and display more prosocial behaviours (Gardner et al., 2005; Ilies et al., 2005). Therefore, coaches should be encouraged to display authentic behaviours, such as speaking honestly, taking into account opinions that may challenge their own, showing an understanding of one's inner values, and frequently displaying moral behaviours in line with moral values, to create more trusting relationships and team cultures, and consequently greater positive emotions and continued commitment. These findings suggest that authentic leadership may thus have beneficial outcomes for continued commitment to sports participation and increasing moral behaviours in sport, two highly important issues in sport currently.

Contrary to our hypothesis, authentic leadership was not indirectly related to athletes' perceptions of their teammates' prosocial behaviours via team culture. This finding is not in agreement with previous literature (e.g., Hannah et al., 2011), which suggested that authentic leadership could be related to followers' prosocial behaviour, as a result of authentic leaders creating trusting climates. This discrepancy could be due to Hannah et al. (2011) not specifically measuring team culture and instead just suggesting authentic leaders may create positive climates. Furthermore, Hannah et al. (2011) used a sample of soldiers rather than athletes, who may have different types of team cultures and different perceptions of prosocial behaviours, and so the findings cannot be directly compared.

Practical Implications

The results of our study highlight the importance of authentic leadership within the context of sport and demonstrate its positive impact on a wide variety of important athlete outcomes. Specifically, the findings suggest that in order to potentially create more committed athletes, who report greater affect, and more prosocial behaviours, coaches should demonstrate authentic behaviours to develop more trusting relationships with their followers and create more positive team cultures. Trust, team culture, and moral behaviours are important variables in sport because sport is social in nature (Hodge & Lonsdale, 2011). These variables are highly influenced by the leadership coaches show and can determine whether an athletes' development is positive or negative (O'Boyle et al., 2015). Therefore, investigating positive forms of leadership, which may influence these variables are vital. Furthermore, commitment, trust and positive affect are particularly important variables in influencing whether athletes remain dedicated to sport (Gould, 1987). Sports participation has been shown to decline with age beyond adolescence (Price & Weiss, 2013). Our results indicated that authentic leadership was positively related to athletes' trust, commitment, and positive affect, thus suggesting that promoting authentic leadership could help to address issues with sports participation. Furthermore, immoral

behaviours in sport are commonplace; our results indicated that authentic leadership was positively related to athletes' prosocial behaviours and so promoting authentic leadership amongst coaches may help to create more positive, moral environments in order to promote more moral behaviours and thus address immoral behaviours in sport (Laure & Binsinger, 2007).

Limitations and Future Directions

Our research has revealed some interesting findings but also has some limitations. First, the study was cross sectional in nature and so this did not allow for a cause-and-effect relationship to be established. Nonetheless, the cross-sectional nature of this study was needed to establish the relationships between authentic leadership and the athlete outcomes, as research on authentic leadership in sport is still in its early stages. Authentic leadership and the relationships leaders have with their followers are complex and develop over time, and this could not be captured by the cross-sectional nature of the study (Shamir & Eliahu, 2005). Future research should conduct a longitudinal study or a field experiment, in which authentic leadership is manipulated to increase confidence in the casual nature of the relationships identified in this study (Aguinis & Bakker, 2020). Second, the study used self-report measures with Likert scales. This reduces the generalizability and validity of the findings, as it does not allow for in-depth answers and relies on athletes' perceptions. Future research should therefore use methods to also capture the leaders' perspective, open-ended questions and observational measures, in order to gain a more in-depth picture of authentic leadership in sport (Nelson et al., 2014; Walumbwa et al., 2008). Furthermore, future research could develop a coaching intervention, designed to increase coaches' use of authentic leadership, and investigate the impact of this intervention on coaches' behaviours and athlete outcomes.

Conclusion

Our findings extend the current literature by demonstrating the relationship between authentic leadership and a wide range of athlete variables. Specifically, our study revealed that

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authentic leadership was positively related to athletes' commitment, positive affect, and perceptions of their teammates' prosocial behaviours, via trust and team culture. The study makes a significant contribution to sport leadership literature by revealing the value of authentic leadership in predicting these athlete outcomes. In combination with models of authentic leadership, our results suggest that coaches should be encouraged to display authentic leadership behaviours to create trusting relationships and team cultures, in order to produce athletes with higher commitment, positive affect, and prosocial behaviours. This may potentially help to address issues with sports participation and immoral behaviours in sport.

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Table 1

Descriptive Statistics, Alphas and Zero-order Correlations (N = 365)

Variable	<i>M</i>	<i>SD</i>	Min	Max	α	1	2	3	4	5	6
1. Authentic leadership	3.94	.60	1.64	5.00	.89	-					
2. Trust	5.72	.99	2.00	7.00	.90	.68*	-				
3. Team culture	4.10	.52	2.32	5.00	.88	.38*	.32*	-			
4. Positive affect	4.10	.68	1.00	5.00	.88	.40*	.44*	.30*	-		
5. Commitment	4.28	.73	1.75	5.00	.81	.31*	.37*	.29*	.38*	-	
6. Prosocial behaviour	4.26	.50	2.20	5.00	.75	.22*	.24*	.16*	.22*	.33*	-

Note. Possible range for all variables = 1-5, except for trust = 1-7.

* $p < .01$.

1

Table 2*Indirect Effects of Authentic Leadership on Commitment, Positive Affect and Prosocial Behaviours via Trust and Team Culture (N = 365)*

Indirect effects of AL	b path		95% CI		ab path		95% CI	
	B	SE	LL	UL	B	SE	LL	UL
via Trust on								
Commitment	.13**	.05	.03	.22	.15**	.05	.03	.25
Positive affect	.19**	.05	.11	.29	.21**	.06	.12	.35
Prosocial behaviour	.07*	.03	.01	.13	.07*	.03	.01	.14
via Team culture on								
Commitment	.16**	.07	.03	.28	.05**	.02	.01	.10
Positive affect	.19**	.06	.08	.33	.06**	.02	.02	.11

Note. All paths at the within level. B = the relationship between the mediators and the outcome variables. *ab* = indirect effect of AL on the outcome variables through the mediators. An effect is significant when the confidence interval does not contain 0.

SE = Standard Error; CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit.

** $p < .01$, * $p < .05$.

Figure 1

Path analysis results

Note. This figure shows the A path between AL and the mediator variables and the B path from the mediators to the outcome variables at the within level.

Values represent unstandardized coefficients.

A dotted line represents as non-significant effect.

SE for the A path is .07 for trust and team culture.