The Role of Authentic Leadership on Athlete Outcomes Over Time

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Abstract

Introduction

Authentic leadership is a form of leadership which could result in positive outcomes in athletes, yet, it has received limited research attention in sport. Furthermore, previous research of authentic leadership in has been cross sectional and so it is not known how the relationships between authentic leadership and athlete outcomes change over time. The aim of the study was to investigate whether coaches' changes in authentic leadership are related to changes in athlete outcomes directly and indirectly through changes in trust, team culture, and cohesion over time.

Method

Data were collected via questionnaires. The study had a longitudinal design with 421 (227 females, $M_{age} = 20.32$) team sport athletes at time 1 and 247 athletes at time 2 (5 months later).

Results

Changes over time in authentic leadership were related to changes in athletes' perceptions of their teammates' prosocial behaviours and enjoyment, both directly and indirectly via changes in trust and cohesion.

Conclusions

Our findings enhance our understanding of authentic leadership in sport and highlight its importance in predicting crucial positive athlete outcomes.

Keywords: Coaches, commitment, enjoyment, positive affect, trust, team culture

The Role of Authentic Leadership on Athletes' Achievement and Moral Outcomes

Leaders are seen as highly influential within sports environments and can positively or negatively impact on followers' development, wellbeing, and morality (e.g., Vella et al., 2013). As such, several models of leadership have been proposed in sport, with more recent models focusing 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 has shown to be positively related to several desirable outcomes in athletes is authentic leadership (e.g., Bandura et al., 2019; Bandura & Kavussanu et al., 2018; Houchin, 2011). This model of leadership is highly applicable to sports environments but has thus far received little attention in sport, and even less longitudinal research in sport, despite the suggestion it may be related to beneficial outcomes for athletes and could promote more positive sports environments and continued sport participation.

Authentic Leadership

Authentic leadership is defined as a genuine form of leadership in which leaders show authenticity by demonstrating behaviours in line with their inner values (Endrissat et al., 2007). The term authenticity is derived from ancient Greek philosophy, referring to "to thine oneself be true" (Harter, 2002). Authentic leaders are seen as being aware of their own values, morals, strengths and weaknesses (Avolio et al., 2004). Whilst many definitions of authentic leadership exist, in this study we used Walumbwa et al.'s (2008) definition, as this builds upon the previous definitions and models of authentic leadership (e.g., Gardner et al., 2005; Ilies et al., 2005). Authentic leadership is viewed as a multidimensional construct which goes beyond being true to oneself and incorporates moral and developmental dimensions and the following four key components: self-awareness, relational transparency, internalized moral perspective, and balanced processing.

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Self-awareness pertains to how the leader makes sense of themselves, including being aware of their inner values, strengths, weaknesses, and morals (Avolio et al., 2004; Walumbwa et al., 2008). It is a key element of authentic leadership as one cannot be considered authentic, until they are fully aware of oneself (Ilies et al., 2005). Relational transparency refers to being open with followers and showing their true, authentic self, which results in trusting relationships (Kernis, 2003; Walumbwa et al., 2008). Authentic leaders are open with their followers by showing transparency in their values, behaviours and emotions, admit when they make mistakes, and tell their followers the hard truth. Internalized moral perspective pertains to showing moral behaviours, which are influenced by the leaders' high internal moral standards, rather than external pressures (Avolio & Gardner, 2005). Authentic leaders also show an internalized moral perspective by engaging in ethical decision-making, expressing where they stand on controversial issues and asking their followers to act in line with their own moral values (Walumbwa et al., 2008). Balanced processing means taking into account followers' perspective and all other relevant information before coming to an objective decision; this includes considering alternative points of views (Walumbwa et al., 2008).

Walumbwa et al. (2008) further suggests that authentic leadership is made up of two key components: a moral component reflected in authentic leaders showing high ethical standards and moral behaviours and a developmental component reflected in authentic leaders being able to create open and transparent relationships with their followers as a result of them demonstrating authentic behaviours. These transparent relationships are expected to instil high levels of trust and result in positive developmental outcomes for followers. Based on Walumbwa et al's (2008) definition of authentic leadership and models of authentic leadership, in this study, we examined the influence of authentic leadership on trust,

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cohesion, commitment, enjoyment, and prosocial behaviour, as will be discussed in detail in the following sections.

Trust, Culture, and Cohesion

The focus that authentic leaders place on developing strong relationships with followers, is believed to result in trusting relationships (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). Avolio et al. (2004) suggested that authentic leaders instil trust in followers by: acting as role models, demonstrating high moral values, showing integrity, and being transparent with their values. This evokes followers' self-concepts of their own values and leads them to identify with their leader, and consequently develop higher trust. Other models of authentic leadership also suggest that authentic leaders instil higher trust in followers through modelling their high levels of self-awareness and self-regulation, as well as through identification (e.g., Gardner et al., 2005; Ilies et al., 2005). These models also suggest that trust in turn is expected to indirectly effect the relationship between authentic leadership and follower outcomes (Avolio et al., 2004; Gardner et al., 2005).

The positive relationship between authentic leadership and trust has been supported by studies in the business domain and in sport (Bandura & Kavussanu, 2018; Bandura et al., 2019; Clapp-Smith et al., 2009; Houchin, 2011). However, these studies were cross-sectional. Scholars have suggested that research on authentic leadership should use longitudinal designs as, after followers identify with their authentic leader their trusting relationship develops and this is strengthened over time (Avolio et al., 2004). Furthermore, indirect relationships are processes that unfold over time; thus, longitudinal research is needed to examine the temporal aspect of how authentic leadership, trust, and other outcomes change over time (Laughlin et al., 2018; MacKinnon, 2008).

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Once trusting relationships are established between the authentic leader and their followers, more positive team cultures and higher cohesion may also be created as the coach-athlete relationship is developed and strengthened. Furthermore, authentic leaders also create authentic team cultures which may also foster greater cohesion as a result of the supportive and inclusive environments created by authentic leaders (Gardner et al., 2005). Higgins-D'Alessandro & Sath (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; whilst cohesion is defined as "a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of instrumental objectives and/ or the satisfaction of group members affective needs" (Carron et al., 1998, p. 213).

Gardner et al (2005) proposed that authentic leaders are likely to create positive team cultures through being open with their followers, creating trusting relationships, and by providing opportunities to their followers through being concerned with their followers' development; over time, this becomes the culture of the team (Gardner et al., 2005). This authentic culture can further foster high quality relationships and connections amongst followers, which are sustained as a result of the supportive and inclusive environments created by authentic leaders (Gardner et al., 2005). Therefore, authentic leadership over time should positively influence team culture. Avolio and Gardner's (2005) model further suggests that authentic leaders are more likely to create inclusive environments and develop relationships with their followers, characterised as being built on trust. These environments support followers and encourage the open sharing of information, which empowers followers to grow and develop. Thus, authentic leadership may indirectly influence follower outcomes via team culture (Avolio & Gardner, 2005; Gardner et al., 2005). In this study, the term team climate will be used to refer to team culture.

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The relationship between authentic leadership and team culture has not yet been investigated in a sporting context. Team culture could influence how athletes work together, and is largely affected by the coaches' leadership style (Zander, 1982). 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, authentic leaders of municipal employees, were capable of creating positive climates, characterized by trust, integrity, and support over a 22-month period (Kinnuen et al., 2016). This occurred by acknowledging their followers' perspective and demonstrating moral values and an awareness of their strengths and weaknesses. These climates are then reinforced as the followers begin to take on their leaders' values (Kinnuen et al., 2016). 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/support given by the leader.

Authentic leaders are also likely to create more cohesive teams by displaying high levels of social support, including followers in open discussions and by leading followers to socially identify with their leader, thus promoting greater cohesion (e.g., Ashford & Mael, 1989; Avolio et al., 2004; Bandura et al., 2019). This has been supported by research in sport (e.g., Bandura et al., 2019; Houchin, 2011). Cohesion could in turn influence follower' wellbeing, commitment, and prosocial behaviours. This is because through authentic leaders creating more cohesive groups, team members are likely to be motivated in ways that support team values and positive emotions, by engaging in more frequent prosocial behaviours to appease teammates and preserve the resulting positive emotions (Bruner et al., 2014). Overtime, as followers trust and identify with their leaders more, cohesion will likely increase, and this may consequently increase athletes' wellbeing, commitment and prosocial

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behaviours further. Therefore, group cohesion may explain the link between changes in authentic leadership and potential changes in athlete outcomes. We hypothesized that changes in authentic leadership would be related to changes in athlete outcomes (e.g., commitment, enjoyment & prosocial behaviours) directly and indirectly via changes in trust, culture and cohesion, over time (e.g., Avolio et al., 2004; Bandura et al., 2019; Bandura & Kavussanu, 2018).

In summary, authentic leadership is expected to result in trusting relationships, positive team cultures, and higher cohesion which may increase over time. In turn, these variables are expected to lead to positive follower outcomes (e.g., Avolio et al., 2004; Walumbwa et al., 2008). It is to these outcomes that we now turn.

Commitment, Enjoyment, and Prosocial Behaviour

According to several models of authentic leadership, authentic leaders are believed to indirectly influence follower outcomes such as commitment and enjoyment (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 enjoyment is defined as “a positive affective response to the sport experience that reflects generalised feelings such as pleasure, liking and fun” and can be considered an aspect of wellbeing (Scanlan, 1993, p. 6). Authentic leaders are expected to promote wellbeing and commitment in followers by creating trusting relationships, spreading their own positive emotions to their followers, and by creating cohesive 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 wellbeing has been supported by several scholars (Leroy et al., 2012; Nelson et al., 2014; Peus et al., 2012). A cross-sectional study in sport found an indirect relationship between authentic leadership and athletes’ commitment via trust (Bandura & Kavussanu, 2018). Over time, the trusting relationships and cohesive teams

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created by authentic leaders are suggested to increase as the relationships between authentic leaders and their followers gets stronger, leading to higher commitment and enjoyment (Avolio et al., 2004). Such changes could be examined via longitudinal research in sport.

Walumbwa et al.'s. (2008) model also suggests authentic leaders could influence athletes' prosocial behaviour via trust and team culture. Specifically, authentic leadership has a moral component, which is reflected in authentic leaders demonstrating moral behaviours and thus serving as moral exemplars to their followers who are expected to imitate this behaviour. According to models of authentic leadership (i.e., Gardner et al., 2005; Ilies et al., 2005) authentic leaders are capable of influencing followers' prosocial behaviours indirectly through role modelling by establishing a team norm to act morally. As such, followers of authentic leaders would be expected to show more prosocial behaviours. Support for this proposed link has been provided by a study conducted in a military setting, with prosocial behaviour being defined as ethical behaviour that is common in a military setting such as 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 the sport context, prosocial behaviour has been examined as "voluntary behaviour intended to help or benefit another individual" (Kavussanu and Boardley, 2009, p. 99). Authentic leadership could lead to higher prosocial behaviour within the team through creating trusting relationships, cohesion, and moral team culture.

Current Investigation

In summary, authentic leaders may influence followers' commitment, enjoyment, and teammate prosocial behaviour by creating trusting relationships and cohesive teams (e.g., Clapp-Smith et al., 2009; Hannah et al., 2011). However, only a limited amount of studies have investigated the influence of authentic leadership on athlete variables, despite it being highly relevant to a sporting context. Given the influence of coaches within sports

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environments, investigating beneficial forms of leadership are vital within sport (O'Boyle et al., 2015). Authentic leadership is centred around trusting relationships and focuses on athlete development, and therefore it could be key to creating more positive sports environments and positively impacting on athletes' development, thus, there is merit in investigating this form of leadership further, within a sports environment. The relationship between authentic leadership, athletes' perception of their teammate's prosocial behaviours, and enjoyment 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, moral behaviours are commonplace amongst athletes, with coaches playing an important role in this. Therefore, investigating whether authentic leadership will promote more prosocial behaviours could help to address immoral behaviours in sport.

Furthermore, a limitation of previous sport research is that it has employed cross-sectional designs, thus providing limited evidence of the long-term influence of authentic leadership on athlete outcomes. There is a need to employ longitudinal research designs, for several reasons. Firstly, it is important to examine how authentic relationship and athlete outcomes change over time. Authentic leadership and follower outcomes such as trust, cohesion, wellbeing, commitment, and prosocial behaviours are expected to positively change over time as followers begin to trust and mimic the emotions of their leaders, as well as by authentic leaders creating more positive team cultures and cohesive teams over time as the relationships between authentic leaders and their followers are strengthened (Avolio et al., 2004). Secondly, cross sectional research alone could lead to inappropriate inference about the strength or direction of the relationships between authentic leadership and athlete outcomes (Mitchell & James, 2001). Finally, longitudinal research can improve the quality of effect size estimates and proposed hypotheses in previous studies (Wang et al., 2017).

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This research will fill these gaps in the literature. We conducted a longitudinal study which examined: (a) whether authentic leadership effected changes in athlete outcomes directly, over time (e.g., Avolio et al., 2004; Ilies et al., 2005); and (b) whether authentic leadership indirectly effected changes in the athlete variables over time, via changes in trust, culture, and cohesion (e.g., Bandura et al., 2019; Bandura & Kavussanu, 2018). We recruited team sport athletes and focused on team sports because leaders are highly capable of influencing the team environment and because culture and prosocial behaviours are important within this context (Jowett & Chaundry, 2004).

Method

Participants

A total of 421 participants (53.9% female) took part in the study; this number was based on a power analysis which suggested that for a linear regression with 7 predictors and a small effect and power of .80, 103 participants would be required. The participants in study 2 were different to those in study 1. Participants were athletes from team sports, recruited either from university leagues ($n = 387$) or regional level leagues ($n = 34$). The sports included in the study are lacrosse ($n = 95$, 22.6%), American football ($n = 73$, 17.3%), hockey ($n = 67$, 15.9%), cheerleading ($n = 53$, 12.6 %), dodgeball ($n = 38$, 9%), football ($n = 37$, 8.8%), volleyball ($n = 24$, 5.7%), ultimate Frisbee ($n = 22$, 5.2%) and korfbal ($n = 12$, 2.9%). The athletes had an average age of 20.32 ($SD = 2.86$). Participants had played for their respective team and coach for an average of 1.64 ($SD = .82$) and 1.50 years ($SD = .80$). The inclusion criteria for the study were that athletes should be over 16 years old, be healthy, participate in a team sport and have been with their coach and team for a year or more.

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).

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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 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, & Sath, 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

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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).

Team Cohesion. Athletes rated their perceptions of team cohesion using the Youth Sport Environment Questionnaire developed by Eys et al. (2009) ($\alpha = .91$). The questionnaire measures both task (e.g. “we all share the same commitment to our team’s goals”) and social cohesion (e.g. “we like the way we work together as a team”), with eight items respectively, as well as two negatively worded items. Participants were told that the statements relate to their feelings towards their team and were asked to circle the number which best reflects their feelings using a 9-point Likert-type scale with 1 corresponding to “strongly disagree” and 9 corresponding to “strongly agree”.

Enjoyment. Athletes rated their enjoyment using the enjoyment subscale from the Sport commitment model developed by Scanlan et al. (1993) ($\alpha = .94$). An example item is “do you enjoy playing for this team”. The enjoyment subscale uses a 5-point Likert scale with 1 corresponding to “not at all” and 5 “very much”.

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-

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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).

Data Analyses

Firstly, preliminary analysis was conducted to identify any missing data. Descriptive statistics, reliability analysis, and correlations were then computed using Statistical Program for Social Sciences (SPSS v. 25). For the main analysis, the MEMORE macro of SPSS was used (Montoya & Hayes, 2017). Montoya & Hayes (2017) suggest the MEMORE macro can be used to measure changes in X, M and Y over 2 or more occasions, to assess whether changes in X are related to changes in Y through changes in M, over time. This path analytic framework is useful for testing mediation in complex models, such as in this study, which

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have more than one mediator, as it uses one test to examine all the paths together rather than running multiple tests for each individual path (Montoya & Hayes, 2017).

Procedure

After ethical approval was received from the university ethical committee, the researchers contacted the teams' coaches, via email or phone, and they were asked whether their athletes could take part in the study. Informed consent was then obtained from the participants. The questionnaires were then given to the athletes before or after a training session, in the same place as their normal training session. At time 1, surveys were given to 421 athletes from 28 teams, and then again five months later, at time 2, to 247 athletes from 26 teams who completed the first survey, leaving 58.7% of responses from the original participants.

Results

Preliminary Analysis

The data was found to be normally distributed, according to the Shapiro-Wilk test and visual inspection of the histograms, Q-Q plots and boxplots. Missing data ranged from 0 to 1.4 % and were found to be missing at random (as indicated by little MCAR test), thus missing data was replaced with the mean of the variable (Acock, 1997; Tabachnick & Fidell, 2001).

Alpha Coefficients, Descriptive Statistics, and Zero-Order Correlations

Table 1 displays the reliabilities, descriptive statistics, and correlations among the study variables at Times 1 and 2. The Cronbach alpha scores of the scales were considered excellent, as suggested by George and Mallery (2003).

Main Data Analysis

For the main data analysis, the MEMORE macro was used. For each variable, this macro creates a new variable which represents the difference between time 1 and time 2

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values in each variable, and is referred to as “X = time” (Montoya & Hayes, 2017). This first step of the MEMORE analysis involved a one sample *t*-test (Judd et al., 2001; Montoya & Hayes, 2017). The second step involved an OLS regression, using bootstrapping to produce a regression coefficient and 95% confidence intervals (CI). We used Model 1 as it allowed us to further test our hypothesis of whether changes in our three athlete outcome variables (Commitment, enjoyment and prosocial behaviours (Y) occurred as a result of changes in authentic leadership, and subsequent changes in the three mediators (trust, cohesion, and team culture (M). We used 3 serial mediation models with authentic leadership first, and trust, team culture or cohesion second. In the serial mediator model, the variables are inputted in pairs (e.g., authentic leadership time 2 and time 1).

The results of the first step of the MEMORE analysis revealed a significant positive change between the two time points for most variables. As can be seen in Table 3, changes in authentic leadership were significantly related to changes in trust and cohesion. Changes in trust were significantly related to changes in enjoyment. Finally, changes in cohesion were significantly related to changes in enjoyment and teammates’ prosocial behaviours.

Indirect Effects

The results of the serial mediation model can be seen in Figure 1. Changes in authentic leadership and the subsequent changes in trust, were related to significant changes in cohesion $\beta^{\wedge} = .06$ ($SE = .03$), 95% CI [.02, .12]. Subsequent changes in trust $\beta^{\wedge} = .05$ ($SE = .02$), 95% CI [.02, .09] and cohesion $\beta^{\wedge} = .04$ ($SE = .02$), 95% CI [.01, .08] were significantly related to changes in enjoyment. Changes in trust $\beta^{\wedge} = .03$ ($SE = .02$), 95% CI [.01, .07] and cohesion $\beta^{\wedge} = .05$ ($SE = .02$), 95% CI [.01, .09] were significantly related to changes in athletes’ perceptions of their teammates’ prosocial behaviours. Changes in authentic leadership, and subsequent changes in trust $\beta^{\wedge} = .07$ ($SE = .02$), 95% CI [.03, .12] were related to significant changes on commitment. However, the total effect of time on commitment was

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not significant $\beta^{\wedge} = .01$ ($SE = .06$), 95% $CI [-.10, .12]$: thus, commitment did not significantly change over time.

Discussion

Only a limited amount of research has been conducted on authentic leadership in sport, despite it being highly applicable to sports environments and the suggestion that it may be related to numerous positive outcomes for 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). This previous research has also been cross-sectional, and it is not known how the relationships may change over time, despite models of authentic leadership suggesting authentic leadership and follower outcomes may change over time (Avolio et al., 2004). The present study sought to fill this gap in the literature by examining whether changes in authentic leadership would be directly related to changes in athlete outcomes (commitment, enjoyment, and athletes' perceptions of their teammates' prosocial behaviours) over time, as well as indirectly related via changes in trust, team culture, and cohesion, over time.

In support of our hypothesis, changes in authentic leadership was directly related to changes in athletes' enjoyment and athletes' perceptions of their teammates' prosocial behaviours, as well as indirectly related via changes trust and cohesion. These results are in line with previous studies conducted within sport and other environments and with similar variables (e.g., Bandura & Kavussanu, 2018; Clapp-Smith et al., 2009; Nelson et al., 2014). Taken together with previous research, our results suggest that through coaches' showing authentic behaviours, such as being open and genuine, athletes may be more inclined to trust them, which may lead them to feel more content and create more cohesive teams (Gardner et al., 2005; Ilies et al., 2005). Therefore, coaches should be encouraged to display authentic behaviours, such as speaking to followers honestly, taking into account everyone's opinions

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and frequently displaying their true emotions, to create more trusting relationships and more cohesive teams, and consequently greater enjoyment and continued commitment.

Furthermore, this is the first longitudinal study in sport to provide evidence to support the relationships between changes in authentic leadership on athletes' enjoyment and teammates' prosocial behaviours via trust and cohesion, over time. Our findings support previous literature such as Avolio et al. (2004), who suggested that followers' perception of their leader as authentic, and consequently their reported outcomes, may change over time as the relationship between authentic leaders and their followers develop and strengthen. These results highlight the importance of coaches showing authentic leadership behaviours consistently over time. These behaviours have the potential to enhance individuals' trust and cohesion, and subsequently improve athletes' enjoyment and prosocial behaviours, which may have beneficial outcomes to continued sports participation and increasing moral sports environment, two highly important issues in sport currently.

We did not find support for our hypothesis that changes in authentic leadership would be related to changes in team culture and commitment. These null findings could be due to our study not being long enough, i.e., under a year, to find a change in these variables or because it did not include more than 3 time points. Culture often takes a long time to be created as it involves changing the team's values, which may not be adequately captured with just two time points relatively close together (Cruickshank & Collins, 2013).

Practical Implications

Our study highlights the importance of authentic leadership within the context of sport and demonstrated its impact on a wide variety of important athlete outcomes. Specifically, the findings suggest coaches should show authenticity, in order to potentially develop more trusting relationships and cohesive teams, to in turn produce happier, committed, and moral athletes. Our findings are important because trust, cohesion and moral behaviours are

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particularly important variables within sport due to its social nature and are vital in determining how athletes develop (Hodge & Lonsdale, 2011). Athletes' development is not always positive, so investigating positive forms of leadership in sport are vital (O'Boyle et al., 2015). Commitment and enjoyment are particularly important variables in influencing athletes' dedication to sport (Gould, 1987). Therefore, promoting authentic leadership could address issues with sports participation beyond adolescence, which has been shown to decline with age (Price & Weiss, 2013). Furthermore, we found authentic leadership to be positively related to athletes' prosocial behaviours and so promoting authentic leadership amongst coaches may help to create more positive, moral environments in order to address immoral behaviours in sport (Laure & Binsinger, 2007). Finally, our study is the first in sport to demonstrate that authentic leadership is positively related to athlete outcomes overtime, highlighting the need for coaches to consistently show authentic behaviours in order to build trusting relationships with their athletes to promote beneficial outcomes in athletes.

Limitations and Future Directions

Our research has revealed some interesting findings but also has some limitations. First, the study included only two time points, thus we do not know how variables changed in the intervening period. Future research could include three or more time points, over a longer period of time, or conduct a field experiment, in which authentic leadership is manipulated to reduce any inferential error (Aguinis & Bakker, 2020). Secondly, we were not able to obtain second responses from several participants, which may reduce the generalizability of the findings (Bildt et al., 2001). However, drop out is typical in longitudinal studies. Future research should 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 involve the development of a coaching intervention, designed to increase coaches' use of the

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four components of authentic leadership, in order to promote more authentic behaviours and consequently enable positive athlete outcomes.

Conclusion

Our findings extend the current literature by demonstrating the relationship between authentic leadership and a wide range of athlete variables. In particular, our findings demonstrated the relationships between authentic leadership and athletes' enjoyment, and perceptions of their teammates' prosocial behaviours, via trust and cohesion. The longitudinal nature of the study allowed us to investigate how these relationships change over time. The study makes a significant contribution to sport leadership literature by revealing the value of authentic leadership in predicting athlete outcomes. Therefore, coaches should be encouraged to display authentic leadership behaviours, to produce more moral athletes with higher enjoyment, in order to address issues with sports participation and immoral behaviours in sport.

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Table 1

Descriptive Statistics, Cronbach Alphas and Pearson Correlations (N = 421)

	Time 1					Time 2										
Variable	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	α	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7	
1. Authentic leadership	4.15	.62	1.06	5	.94	4.31	.52	.92	-	.66**	.44**	.33**	.25**	.28**	.25**	
2. Trust	5.97	.92	2.22	7	.92	6.21	.76	.94	.69**	-	.37**	.31**	.31**	.30**	.20**	
3. Team culture	4.10	.56	2.36	5	.92	4.20	.50	.92	.59**	.53**	-	.35**	.30**	.14*	.41**	
4. Cohesion	7.26	1.07	3.41	9	.91	7.44	.95	.89	.34**	.32**	.43**	-	.33**	.31**	.35**	
5. Enjoyment	4.63	.56	2.50	5	.94	4.75	.46	.92	.41**	.39**	.43**	.50**	-	.42**	.40**	
6. Commitment	4.32	.65	1.75	5	.85	4.40	.68	.88	.39**	.38**	.25**	.41**	.53**	-	.22**	
7. Prosocial behaviour	4.22	.64	1	5	.90	4.36	.55	.88	.29**	.29**	.44**	.33**	.39**	.17**	-	

Note. Time 1 correlations are below the diagonal and time 2 correlations are above the diagonal.

Possible range for authentic leadership, team culture, enjoyment, commitment and prosocial behaviours scales was 1-5, 1-7 for trust, and 1-9 for the cohesion scale.

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

Table 2*Changes in the variables over time (t-test results, N = 421)*

Variable	b [^]	SE	t	95% CI	
				LL	UL
Authentic leadership	.12*	.05	2.46	.03	.22
Trust	.12*	.05	2.33	.19	.23
Team culture	.13	.08	.81	-.04	.10
Cohesion	.30**	.08	3.66	.14	.46
Commitment	.01	.05	.11	-.10	.12
Enjoyment	.11**	.04	2.58	.03	.19
Prosocial behaviour	.20**	.05	3.77	.09	.30

Note. b[^] = Predicted difference in score between time 1 and time 2 for each variable.

** $p < .00$, * $p < .05$.

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Table 3

MEMORE analysis: t-test results. Indirect effects of changes in authentic leadership via trust and cohesion (N = 421)

	$\beta^{\wedge}$	SE	95% CI		t	df
			LL	UL		
Effect of changes in Authentic leadership on						
Trust	.94	.07	.82	1.10	13.96*	244
Cohesion	.38	.11	.17	.60	3.52*	244
Changes in trust on						
Enjoyment	.19	.09	.09	.29	2.58*	242
Commitment	.20	.07	.07	.33	3.05*	242
Changes in cohesion on						
Enjoyment	.20	.03	.14	.26	6.25*	242
Commitment	.23	.04	.15	.34	5.48*	242
Prosocial behaviours	.17	.04	.09	.25	4.11*	242

Note. SE = Standard Error; *df* = degrees of freedom.

**p* < .05.

Figure 1

Regression Results

Note. This figure represents the relationship between the changes in enjoyment and prosocial behaviours through authentic leadership and subsequent changes in trust and cohesion.

Values represent $\beta^{\wedge}$ value.

$*p = <.05$.